

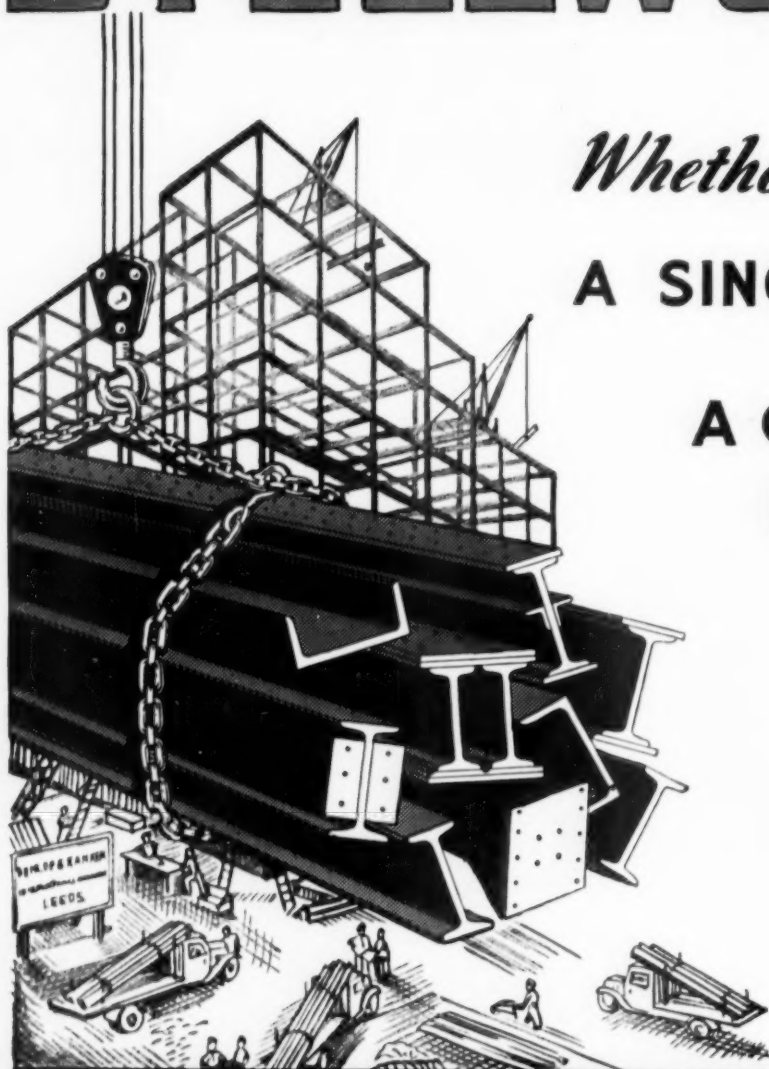
THE ARCHITECT & BUILDING NEWS

16 DECEMBER 1954 · VOL. 206 · NO. 25 · ONE SHILLING WEEKLY

- TECHNICAL HIGH SCHOOL, GREAT YARMOUTH
- WOODFORD SYNAGOGUE
- CEMENT ECONOMY

PUBLISHED IN LONDON SINCE 1854

STEELWORK



Whether you want
**A SINGLE JOIST
OR
A COMPLETE
BUILDING**

Try
D & R
STEELWORK
SERVICE

DUNLOP & RANKEN

CONSTRUCTIONAL ENGINEERS LTD
IRON & STEEL STOCKHOLDERS

TELEPHONE
27301 (20 LINES)

LEEDS

TELEGRAMS
"SECTIONS LEEDS"



HE'LL FLY TO YOUR SITE IF NECESSARY

Scotland is Bob Hamilton's* bailiwick. All of Scotland—from Gretna Green to John O'Groats, Stornoway to St. Andrews (and a round of golf when there's time!). But wartime years of foot-slogging with the Scots Guards and later the Border Regiment have given ex-Major Hamilton a dislike of pedestrian methods of travel. "Get on with the job" is his impatient motto. And he'll hop the next plane to your site if the job calls for it. He has not yet been known to arrive in an aircraft towing his 35-man service team in a glider but . . . well, here's hoping!

*MR. R. S. HAMILTON WILLIAMS & WILLIAMS LTD.
170 Hope Street Glasgow C.2. (Douglas 0003)

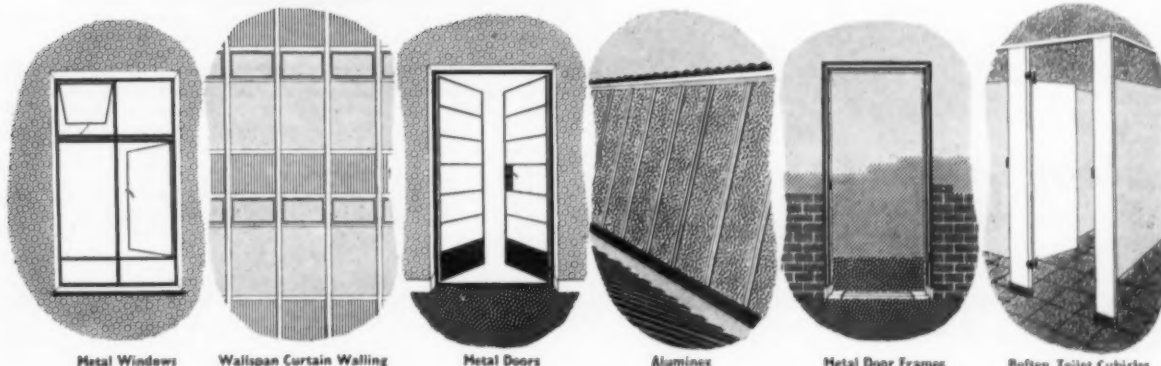
Other offices at: Belfast (23762). Birmingham (Shirley 3064). Bristol (38907). Bromley (Ravensbourne 6274). Cardiff (27092). Crawley (2200). Hertford (3969). Leeds (21208). Liverpool (Central 0325). London (Sloane 0323). Maidstone (51750). Manchester (Blackfriars 9591). Newcastle-upon-Tyne (21353). Nottingham (52131). Reading (50291). Sheffield (51594). Southampton (26252).

METAL WINDOWS

WILLIAMS & WILLIAMS



Member of the Metal Window Association



Metal Windows

Wallspan Curtain Walling

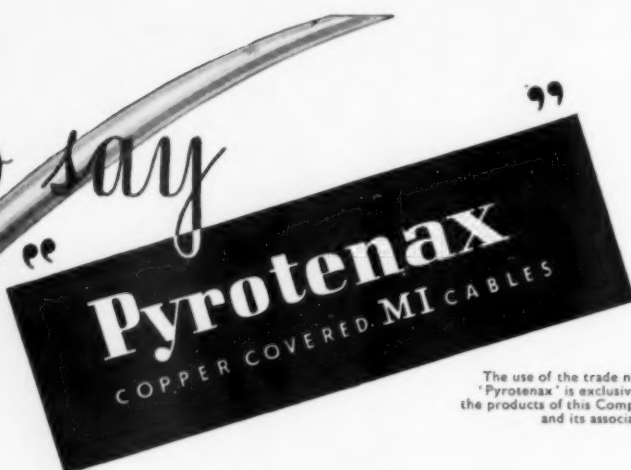
Metal Doors

Aluminex

Metal Door Frames

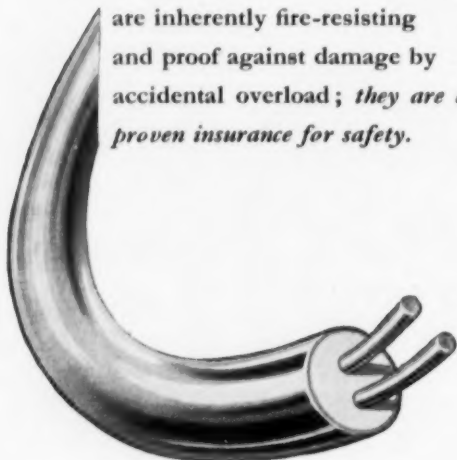
Roften Toilet Cubicles

it's **SAFE** to say



The use of the trade name 'Pyrotenax' is exclusive to the products of this Company and its associates.

The unique characteristic of 'Pyrotenax' cables is that they are made wholly and solely of copper and a mineral insulant. Oil, water, condensation—nothing will affect them. Above all they are inherently fire-resisting and proof against damage by accidental overload; they are a proven insurance for safety.



There are also the Pyrotenax
M.I. WARMING CABLES
for low temperature heating of

FLOORS
TANKS and
PIPES, etc.

These high thermal efficiency cables possess the same desirable characteristics of the standard Pyrotenax Cables, and like them, are **INHERENTLY SAFE**.

Enquiries regarding specific applications are invited.

PYROTENAX LIMITED
HEBBURN-ON-TYNE
PHONE: HEBBURN 32244/7

because they are

NON-FIRE CAUSING

Insulation is non-inflammable and cannot be ignited. 'Pyrotenax' is fully approved for Group II and III flame-proof conditions.

HEAT RESISTING

'Pyrotenax' will operate at temperatures up to 250°C. continuously and 1,000°C. temporarily and will continue to carry current at normal voltages at these temperatures.

MOISTURE PROOF

Unaffected by moisture or hot humid atmospheres, there are no condensation problems with 'Pyrotenax'.

NON-AGEING

The complete structure of core, sheath and insulant is absolutely stable under heat, moisture and sunlight—the insulant cannot 'track' due to leakage currents.

CORROSION PROOF

Copper, of all the metals in common use, is the least affected by general corrosion; thus 'Pyrotenax' is proof against the normal corrosive influences found in buildings, factories, ships and docks; and in plaster, concrete and most soils.

OF HIGH CURRENT CARRYING CAPACITY

The high thermal conductivity of the compressed insulant permits current carrying capacities much in excess of those normally experienced.

RESISTANT TO MECHANICAL MALTREATMENT

The tough pliable sheath and highly compressed insulant permit Pyrotenax cables to withstand violent twisting, pulling, bending, and straightening, or severe blows, without impairing their efficiency.

A non-technical description of 'Pyrotenax' is given in our booklet "Current Carrying". For the technical man "Technical Data" is available — write for your copy.

LONDON: Abbey 1654/5 BIRMINGHAM: Midland 1265 MANCHESTER: Blackfriars 6946 LEEDS: Leeds 27826 GLASGOW: Central 2238
GD11

After the disastrous fire in 1212 KING JOHN issued an ordinance in which the following appeared—

"All shops on the Thames be whitewashed and plastered within and without. All houses which can be plastered let them be plastered within eight days . . . those that will not be plastered in that term be demolished."

FIRE

what is the menace?

A building may be inconvenient, ugly, noisy or unhealthy, without being more than a nuisance to its occupants — BUT IF IT IS A FIRE-TRAP,

IT IS A PUBLIC MENACE.

which is the best wall lining?

"Plaster, being made of sand and calcium sulphate is incombustible and highly fire-resisting as a material. When it is reinforced and thereby held in position by wood laths, or better still by metal mesh, its resistance is valuable... Fire has been known to rage fiercely for a time in the flue-like spaces inside a stud partition while the plastered faces remained intact." From 'Fires in Buildings — the behaviour of materials in fire' by Bird & Docking.

why is Gypsum plaster the best?

FIRE RESISTANCE. "MURITE" Plasters when set revert to Gypsum. This mineral contains 20% of chemically combined water which must be driven off before dangerous temperatures can be reached. This water barrier is one of the reasons why 'MURITE' Gypsum Plasters have such excellent fire-resisting properties.

GYPSUM PLASTER

**QUITE INCOMBUSTIBLE
FULLY FIRE RESISTING**



CAFFERATA & CO. LTD.

NEWARK - UPON - TRENT, NOTTS.

TELEPHONE: NEWARK 2060

TELEGRAMS: "CAFFERATA, NEWARK".

NOW 3 NEW "EXPAMET" BEADS FOR PLASTER

*developed from our well-known
"Expamet" Angle Bead*

They provide more applications for Expanded Metal, the amazingly versatile mesh metal material which is daily finding new uses in building and industry. Please write to us for our samples and our leaflet "Beads for Plaster-work". Our Technical Service is at your disposal for any help and advice you may need.

Expamet

Expanded Metal Products

BEADS FOR PLASTERWORK

THE EXPANDED METAL COMPANY LIMITED

Burwood House, Caxton Street, London, S.W.1. Tel: ABBey 3933. Stranton Works, West Hartlepool. Tel: Hartlepool 2194

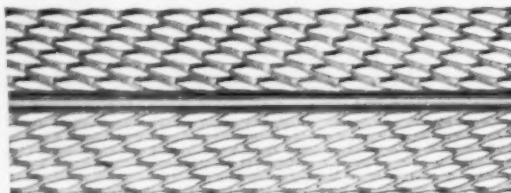
ALSO AT: ABERDEEN • BELFAST • BIRMINGHAM • CARDIFF • DUBLIN • EXETER • GLASGOW • LEEDS • MANCHESTER • PETERBOROUGH

1 "EXPAMET" SCREED BEAD

Made from tight coat galvanised steel, Expanded Metal Screed Bead is designed to provide an economical and practical division between different types of plaster finishes often applied to the walls of bathrooms, kitchens and lavatories.

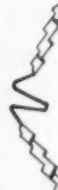
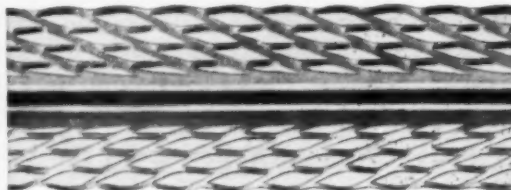
When this practical Screed Bead is used to form a skirting for rooms with a concrete floor, the cement finish of the floor is brought up to the underside of the nose and the plaster of the wall brought down to the top side of the nose. A projection or quirk may be left if desired or the two finishes made flush. The metal nose gives valuable protection at the edge.

"Expamet" Screed Bead is obtainable in standard lengths of 10' or in other lengths up to 10' if required.



2 CONCEALED PICTURE RAIL

The Expanded Metal Picture Rail can be fixed by the plasterer and used as a screed for ruling off the plaster. It is embedded in the plaster finish, leaving a slot round the wall at the height of a picture rail for the insertion of picture hooks; it can also be papered over if desired and the paper pierced for the picture hook.



3 ROUND NOSE AND SQUARE NOSE CASING BEAD

"Expamet" round-nose or square-nose casing bead eliminates timber trim architraves for door and window opening, recesses, etc. It provides a perfect finish for the plaster right up to the opening.

Attractive in appearance and fully fireproof this casing bead gives greater protection for the finished plaster, will not warp or swell and provides a non-projecting finish which is easily cleaned and will not collect dust.

"Expamet" Casing Bead is cheaper than timber; it costs less to erect, as it can be fixed by the plasterer — a joiner does not have to follow him to fit timber architraves. It is obtainable in standard lengths of 7', 8', 9' and 10' and in other lengths under 10' if required.



All illustrations are reduced in size

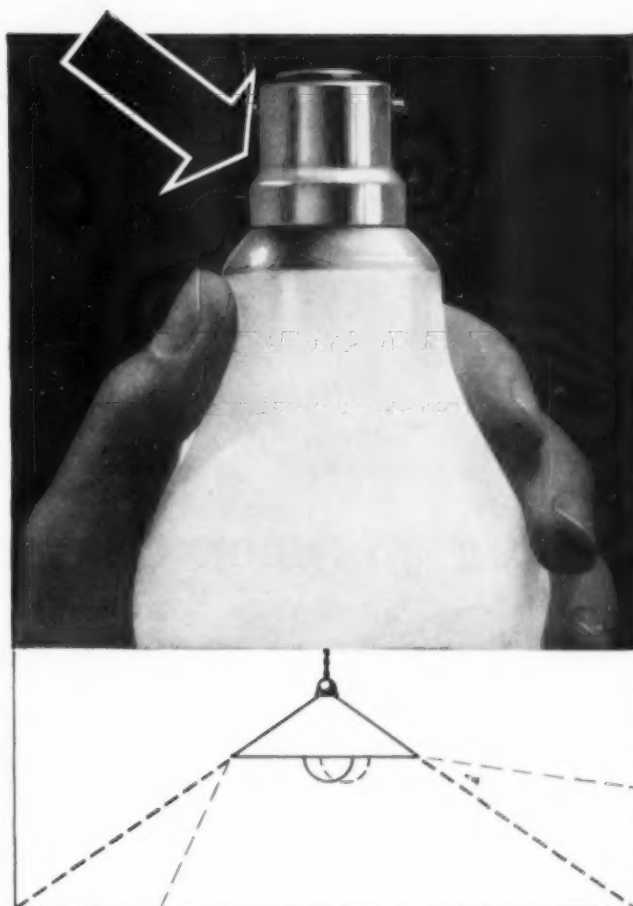
Nothing left to chance...

CAP AXIALITY

Correct distribution of light with Royal "Ediswan" Lamps is ensured because perfect alignment between the cap and the glass envelope is achieved during assembly.

The incorporation of a "register" accurately moulded into the glass during manufacture of the lamp makes correct fitting of the cap automatic.

This is but one example of the intricate operations in the manufacture of Royal "Ediswan" Lamps, calling for the highest degree of technical skill and the utmost care and precision. Nothing is left to chance—only the finest materials are used and there is strict control at each stage of manufacture.



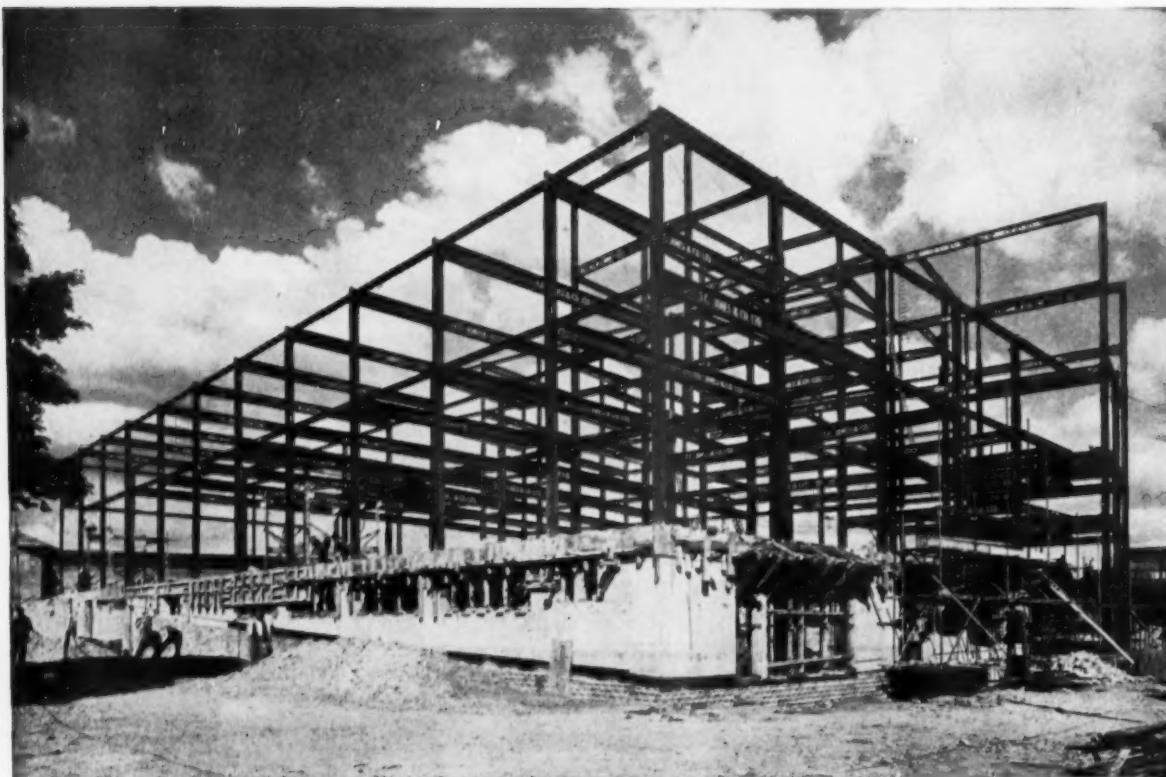
ROYAL

"EDISWAN" LAMPS

BY APPOINTMENT
SUPPLIERS OF ELECTRIC LAMPS
TO THE ROYAL NAVY AND ROYAL AIR FORCE
THE EDISON SWAN
ELECTRIC CO. LTD.

The Edison Swan Electric Co. Ltd., 155 Charing Cross Road, London, W.C.2

Member of the A.E.I. Group of Companies



B.B.C. TELEVISION CENTRE AT WHITE CITY

FIRST STAGE DEVELOPMENT

Development of this new Television Centre is being carried out under the direction of:—
GRAHAM DAWBARN, ESQ., C.B.E., M.A.,
F.R.I.B.A., NORMAN & DAWBARN,
ARCHITECTS & CONSULTING ENGINEERS
in association with

M. T. TUDSBURY, ESQ., C.B.E., F.C.G.I.,
M.I.C.E., CONSULTING CIVIL ENGINEER,
BRITISH BROADCASTING CORPORATION

General Contractors for First Stage Development:
Messrs. HIGGS & HILL LTD.



West elevation of Scenery Production and Storage Building

STEELWORK FABRICATED

AND ERECTED BY

T.C. JONES & COMPANY LTD

THE
600
GROUP
OF COMPANIES

WOOD LANE, LONDON, W.12

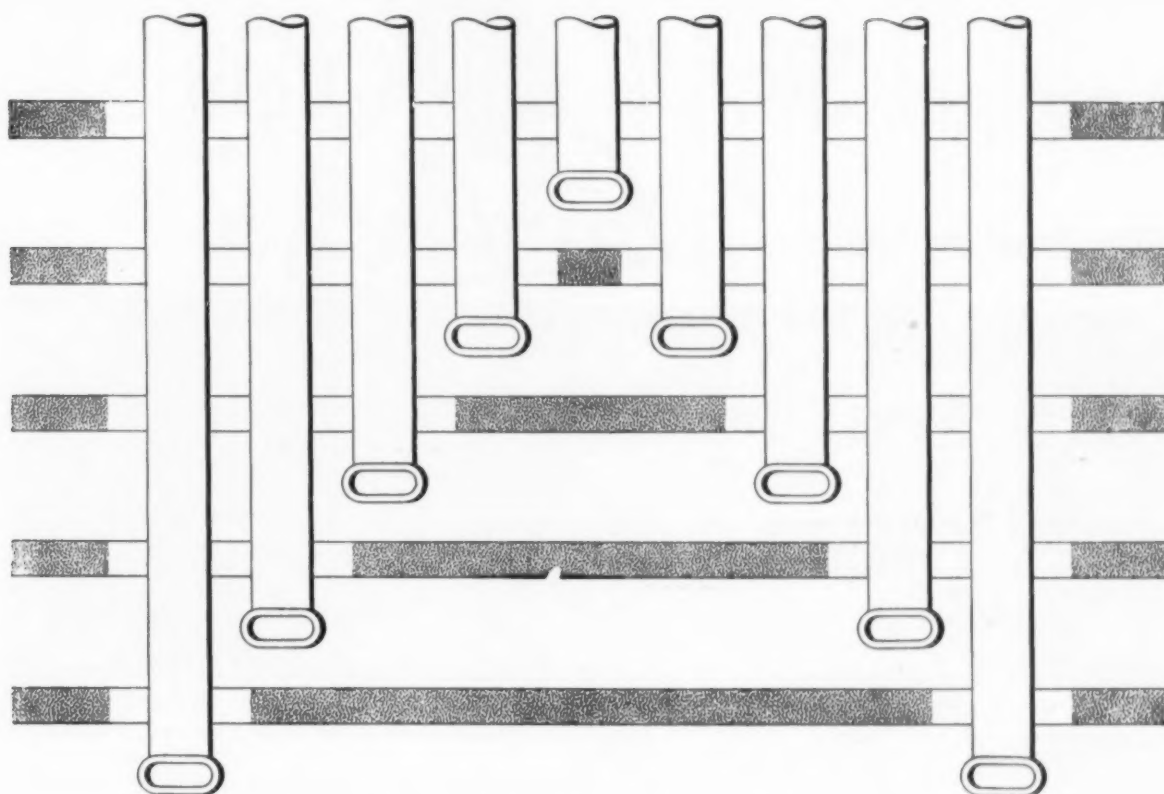
BUTE STREET, CARDIFF

TREORCHY, GLAMORGAN

Telephone: SHEpherds Bush 2020

Telephone: Cardiff 28786

Telephone: Pentre 2381



20th CENTURY FLUES

Tall blocks of flats are already an accepted feature of Britain's urban skyline. There will be more of them, since the economics of modern housing allow the authorities little choice. With tall flats come big problems for the designer of heat services, anxious to satisfy authority's demand for economy and the dweller's wish to control his own fuel bill. On the important question

of flue design for tall buildings the Gas Industry has accumulated much information and done much research. Architects and builders occupied, or likely to be occupied, with plans for flat blocks over six storeys high are invited to make full and free use of the results of this work, either by personal call at the Area Gas Board or by using the form below.



Heat Service

The Gas Industry will be glad to discuss with you the question of heat services and flues. If you have a specific problem, please write in detail. Alternatively, you can use this coupon. In either case, your inquiry should be addressed to your Area Gas Board or to the Gas Council, 1 Grosvenor Place, London, S.W.1.

I/We would like to receive the latest information on flue design.

NAME

ADDRESS

..... 67

The Gas Industry makes the fullest use of the nation's coal.

GC.G11.

You get 34.4% more light

With Venetian Blinds of *Luxaflex*



Bare window wastes light.... leaves far side dark



LUXAFLEX blind spreads light to far side of room

An exhaustive study by the Faber Birren Company* shows: A bare window gives extreme glare on one side of the room, insufficient light on the other. The Luxaflex Blind, by reflection, *spreads* the high-intensity sunlight at the window throughout the room - giving more illumination with less glare. The brightness ratio, which was 14 to 1 with the bare window, is now reduced to a comfortable 4 to 1.

Only LUXAFLEX blind-materials give these maintenance and durability advantages:



Easy cleaning
A damp cloth wipes away even the most stubborn stains from LUXAFLEX aluminium slats and vinyl plastic tapes. The tapes always keep their freshness - never stretch, shrink or discolour.



Snap-back aluminium slats
Now available in 14 beautiful pastel colours. Dura-tized to snap back ruler-straight, even when bent to a 90° angle. Baked-on finish can't rust, chip, crack or discolour.



Look for this mark
Be sure the blinds you specify carry the Luxaflex "visible-invisible" trade-mark on the slats. It's your guarantee of unrivalled quality.

Write for additional information and the name and address of a venetian blind manufacturer using Luxaflex slats and tapes to Hunter Douglas Holland's representative:

Reliance 3373, 3374, 3375, 3376, 1759, 2513

* This study was made at the request of Hunter Douglas Corporation, New York, U.S.A. Copies available on request.



Here's the CELLON weather man!

He can't tell whether it's a broly or a sunshade you'll be needing to cope with to-morrow's climate, but when it comes to knowing how a finish is going to stand up to its working environment, he's your man—or rather he's our man.

The equipment he uses can reproduce and record how the finish you will be buying is going to look after years of exposure to the worst influences of the elements and working conditions.

His knowledge is collated with that of equally keen and far-sighted specialists and technicians to help the finest machinery and the finest raw materials to produce the finest paints.

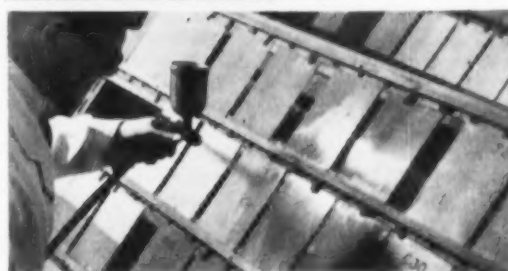


Machine for accelerated weathering tests.



Recorder for temperature and humidity.

Test panels receiving salt spray treatment.

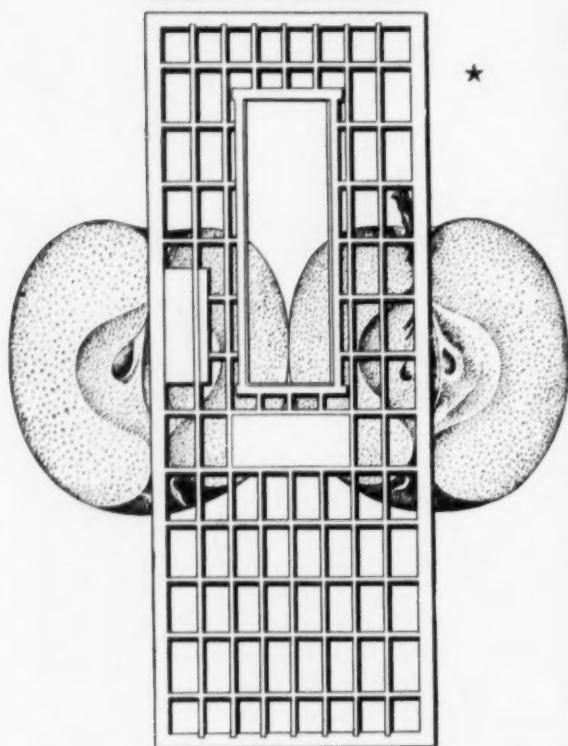


Cerrux Decorative Paints

The Cerrux range of Decorative Finishes includes suitable materials for all classes of decoration, whether for the home, public buildings or the more rigorous conditions of the factory. There is also available Cerrux Satin Emulsion Paint—the ideal wall finish. The Building and Decorating Division of Cellon Limited will gladly give advice on specifications and colour schemes.

CELLON FINISHES *the best*

"SOUND AT THE CORE"



flush doors and apples

are alike in one respect—to be any good, they must be "Sound at the Core".

Now, you cannot cut open every Flush Door to see how it is made, but you can rely on the Flush Doors that we manufacture because each and everyone has a scientifically designed and patented core construction to suit its need and guarantee freedom from any tendency to twist, warp or quilt. We believe that we know how to make Flush Doors, we've been specialising in their production for years and years and years and our range of moderately priced Oak, Stripey Sapeli, or plain plywood faced Flush Doors for painting will meet the most exacting requirements of Architect, Builder and Client alike. You can ensure complete satisfaction by specifying the oldest names in the Flush Door Industry:

XO-MARVEL

Interior, for painting or
graining

BETTA - FLUSH

Interior, for paint or polish
finishes

EXTERNA

For exterior use. Resin Bonded
throughout

DECORFLUSH

Beautifully veneered with Oak
and other fine woods

Sold by good Merchants everywhere. They are made and
guaranteed by the pioneers of Britain's Flush Door Industry:

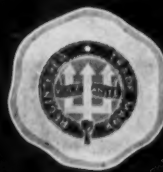
EXEAU PRODUCTS LTD

GREAT CAMBRIDGE ROAD, ENFIELD, MIDDX.
ENFIELD 3859, 4886

★ This drawing illustrates the "EXTERNA"
core with standard 0/1 glass opening.

Vulcanite Roofing

for every type of Roof



Original patentees of Bituminous built-up-roofs

VULCANITE

TRIDENT WORKS · WIGAN

GLASGOW · LONDON · BELFAST



ESTATE
FOR THE
HOUSE

ELLARD

SLIDING DOOR GEAR



"RADIAL"
FOR THE
GARAGE

FOR
HOUSING
ESTATES

FOR THE
PRIVATE
RESIDENCE

ESTATE
FOR THE
HOUSE



"RADIAL"
FOR THE
GARAGE



ELLARD Sliding Door Gear is ideally suited for use on large housing estates and for the distinctive private residence. ELLARD "Estate" Gear is silent—easy running—troublefree, and has elegant appearance. ELLARD "Radial" Gear, for garages and out-houses, provides smooth-running action, gives maximum space, and is easy to fix. Both these well-known types of ELLARD Door Gear are moderate in price and immediate delivery can be obtained from large ironmongers and builders' merchants throughout the country.

CLARKE ELLARD ENGINEERING COMPANY LTD
WORKS ROAD • LETCHWORTH • HERTFORDSHIRE

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TELEGRAMS: MOONBROS BIRKENHEAD

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WESTMINSTER, S.W.1
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TELEGRAMS: MOONBROS, SURREY, LONDON



MOON BROTHERS LIMITED



REGISTERED OFFICE:
25 EXCHANGE STREET EAST
LIVERPOOL, 2

MANUFACTURERS OF AUTOMATIC SHEET METAL WORKING MACHINERY
GENERAL ENGINEERS - JIG, DIE AND PATTERN MAKERS

PLEASE QUOTE IN REPLY RBW/DT.
YOUR REFERENCE

BEAUFORT ROAD
BIRKENHEAD
ENGLAND

Directors
R. B. MOON, (MANAGING)
W. H. NICHOLSON
J. E. MOON
JASPER MOON
J. L. HARVEY

Celotex Limited,
Stonebridge Park,
London, N.W.10.

13th April, 1954

Dear Sirs,

We feel sure that you will be interested in the savings we have made since our factory was lined last summer with Celotex Insulating Board.

During the period 1st October 1952 - 1st April 1953 - before the lining was installed - our original factory used

14,417 gallons of oil at a cost of £645. 15s. 3d. and
16 coke heaters.

Even with the above, we received complaints from our employees that the factory was too cold and we had severe condensation problems which caused a great deal of damage to our machinery through rusting.

Last summer we had the roof and part of the walls lined in both the original factory and in a new extension of approximately the same area. These linings were installed, without interruption to our production, with the Celotex Metal Fixing System. Our fuel consumption for the two factories, from 1st October 1953 to 1st April 1954 amounted to

16,560 gallons of oil at a cost of £741. 15s. 0d.

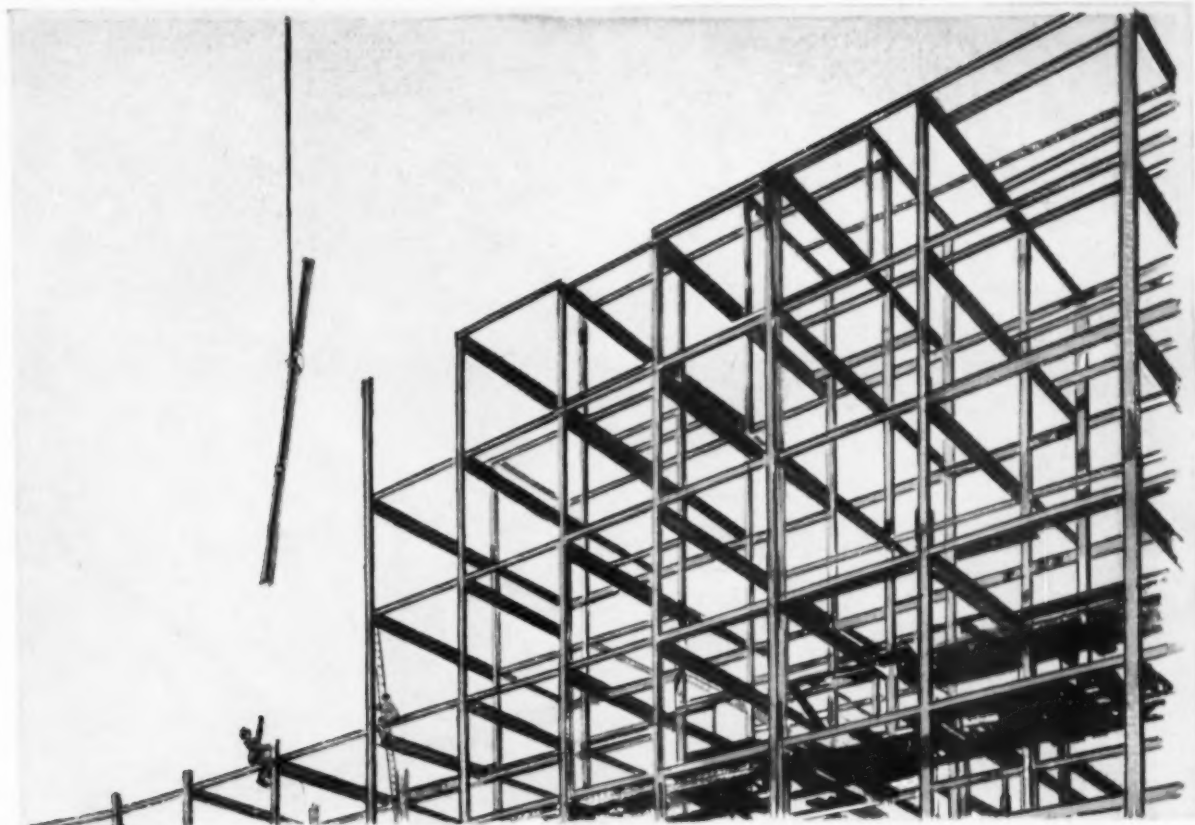
Although we are now heating twice the original area - and maintaining a much higher average temperature - we have been able to dispense with the 16 coke heaters and our fuel costs have been reduced, proportionately, by almost 50%.

In short, we are delighted with the job and it gives us very great pleasure to tell you as much.

Yours faithfully,
for and on behalf of MOON BROTHERS LIMITED,

R B Moon

R. B. Moon - Managing Director.



Rebuilding programmes

Steel production continues to increase, and many rebuilding programmes are now going ahead.

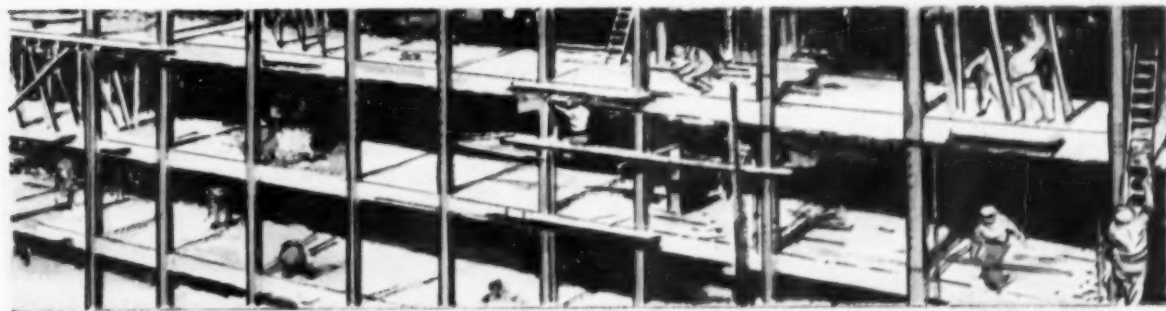
Steelwork has achieved its outstanding acceptance by reason of its unique combination of economic advantages. Time is gained by fabricating the steel members while the site is still being cleared and the foundations laid: later, the various trades can get to work on the lower floors while the framework of the upper floors is

being erected, and a great proportion of the interior construction can be 'dry' work, reducing delay before occupation.

Furthermore, the framework is a 'grid' of great accuracy, assisting the other trades and simplifying the installation or alteration of partitions. Thus, from every aspect, steelwork leads to an earlier occupation of the building and thereby to a better return from the investment.

BRITISH CONSTRUCTIONAL STEELWORK ASSOCIATION, ARTILLERY HOUSE, ARTILLERY ROW, LONDON, S.W.1

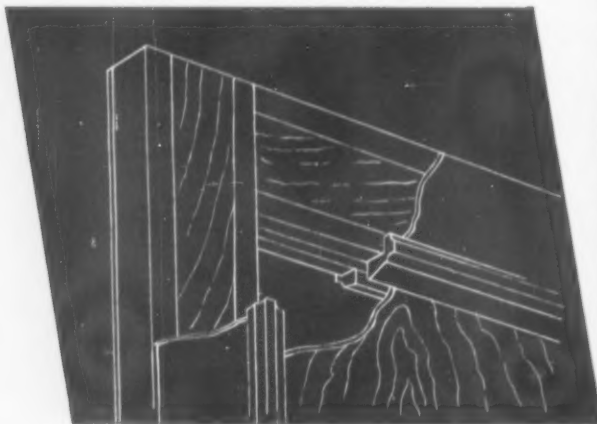
B.C.S.A.



Hills AMBASSADOR

Ideal for the more ambitious scheme, this fine mahogany faced door cannot fail to please the most fastidious single-panel enthusiast. Its classic design and appearance will add a touch of quiet dignity and warmth to the finest interior.

Craftsman-made, from the finest kiln-dried hardwood and suitable for polishing, it is available at a price which brings it well within the range of every better-class project.



These features have building trade appeal

- **STILES AND RAILS** are of laminated construction, giving greater strength and stability. Full length mahogany facing veneers give a finished thickness of $1\frac{1}{4}$ ".
- **FACING VENEERS.** Panel, Stiles and Rails are faced with carefully selected mahogany veneers of uniform colour and grain.
- **BOLECTION MOULD** is from $1\frac{1}{4}$ " x 1" kiln dried mahogany, mitred at the corners and fitting closely to the panel.
- **THE PANEL** is $\frac{1}{2}$ " thick plywood of balanced construction with vertical grain facing veneers.

THE DISTINCTIVE SINGLE PANEL DOOR

Send for further details and prices—NOW!

F. HILLS & SONS LTD.

NORTON ROAD, STOCKTON-ON-TEES.

Telephone: 67141





This new type asbestos-cement sheeting has been used at the new Cement Grinding and Packing Plant, Tanhouse Lane, Widnes, for the Associated Portland Cement Manufacturers Limited.

The sheet has been introduced specifically to provide additional character in vertical cladded areas.

The sheets have a nett cover width of 3' 4" and can be supplied in lengths of 4' 0"—10' 0" rising in 6" increments.

TURNERS ASBESTOS CEMENT CO LTD

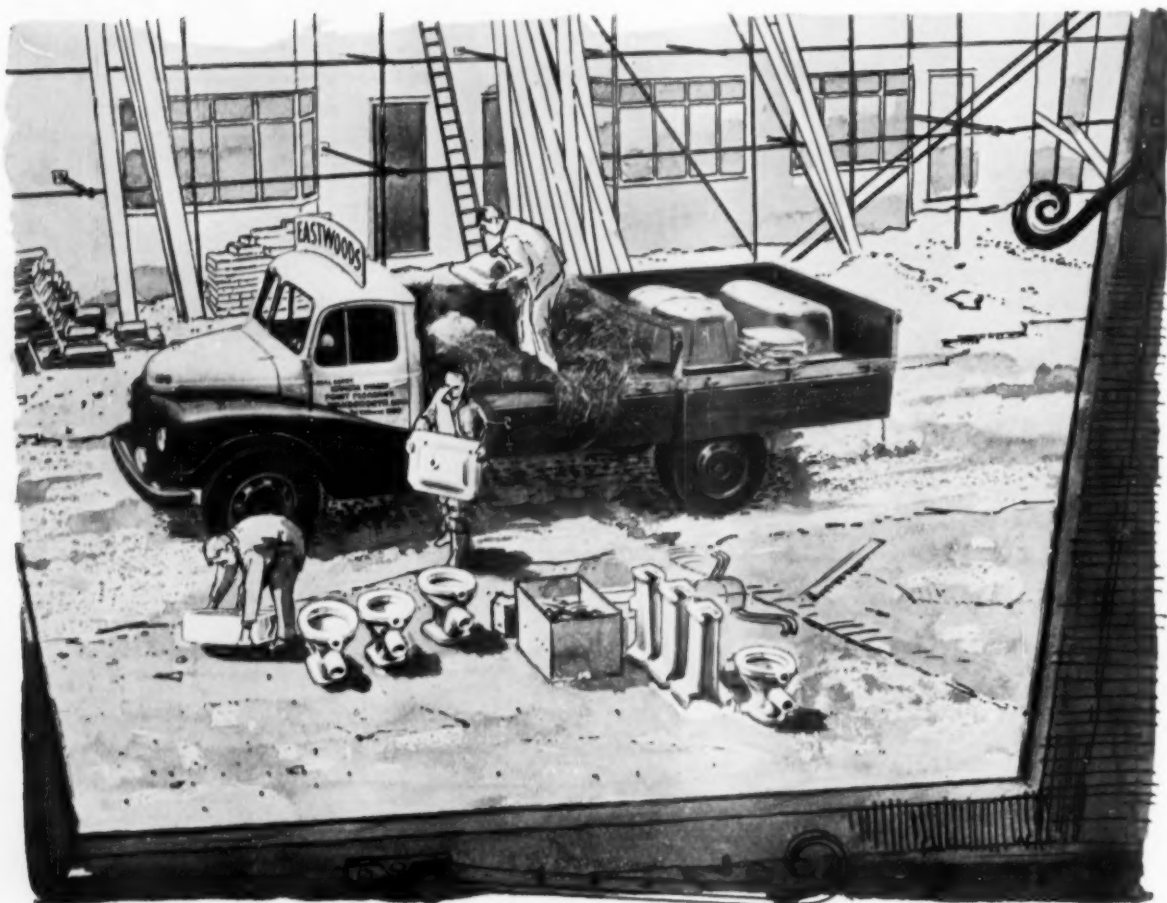
A MEMBER OF THE TURNER & NEWELL ORGANISATION

TRAFFORD PARK

MANCHESTER 17

EASTWOODS supply and deliver Sanitary Ware

In addition to its very extensive manufacturing activities, Eastwoods also maintain a very comprehensive distributing organisation giving a widely used service to Builders and Contractors. Among the many departments concerned with this aspect of the Eastwoods Service is one which deals with the supply of sanitary ware, either for complete new housing schemes or for installation in existing buildings. Where necessary, advice is available on the type of sanitary ware most suitable for particular purposes and full use is made of the distributing facilities provided by Eastwoods Depots and a modern transport fleet to ensure that the supplies are available when and where they are required. Enquiries for Sanitary Ware can be made either to your nearest Eastwoods Depot Manager, or direct to Eastwoods Sales Ltd., at the Organisation's Head Office in London.



EASTWOODS SALES LIMITED

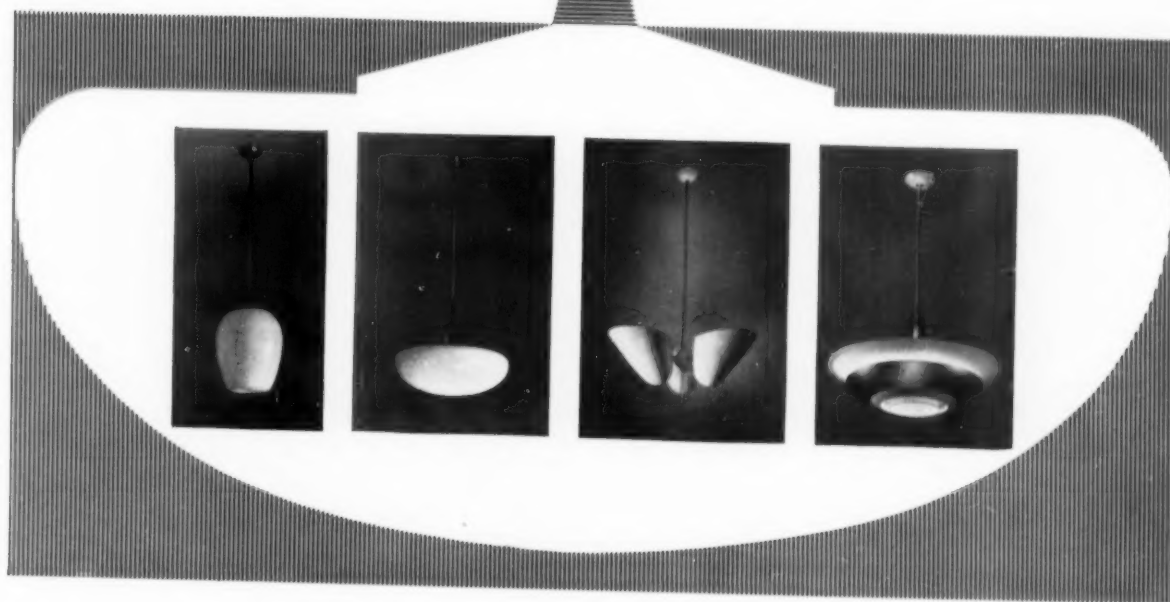
Head Office: Eastwood House, City Road, London, E.C.1.

Tel. CLerkenwell 2040 (30 lines)

Depots in: LONDON (Greenwich, Hillingdon, Isleworth, Kingsland, Mortlake, Wandsworth, Waterloo, Wembley), CAMBRIDGE, COVENTRY, DONCASTER, EASTLEIGH, GILLINGHAM, IPSWICH, LETCHWORTH, NORWICH, SOUTHEND-ON-SEA, SUDBURY (SUFFOLK), WEYBRIDGE.

Tube Pendants

These are examples of various types and styles of tube pendants available from our standard ranges. Some of these are ideally suitable for school and office while others have a far wider application. There are of course multi-light fittings available from our range of ring and radial pendants.



TROUGHTON & YOUNG

TROUGHTON & YOUNG (Lighting) LTD.

The Lighting Centre

143 Knightsbridge, London, S.W.1. Kensington 3444
also at 46 Rodney Street, Liverpool, 1.

Manufacturers of Ultralux, Versalite, Tubalux and Mondolite Lighting Fittings.

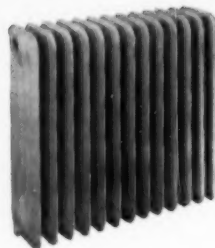


There's a Stelrad Radiator for every Building Need

As your plans for central heating take shape, you will find in the Stelrad range of radiators a means of keeping heating efficiency in harmony with interior design.

Two well-known Stelrads are shown on the right, and an eleven inch two column curved radiator is shown in the picture above. Variations of these radiators are, of course, available.

We have agents and representatives throughout the British Isles at your disposal to advise on the Stelrad range of central heating radiators.



Four column
Stelrad Radiator



Wall Radiator

**STEEL RADIATORS
LIMITED**

BRIDGE ROAD, SOUTHALL, MIDDLESEX
Telephone: Southall 2603

THE
ARCHITECT
& BUILDING NEWS

16 December 1954

"The Architect and Building News" incorporates the "Architect," founded in 1869, and the "Building News," founded in 1854. The annual subscription, inland and overseas, is £2 15s. 0d. post paid: U.S.A. and Canada \$9.00

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C I R C U L A R 2 8 3

THE Minister of Education's plans for pumping more money into the schools and clubs of rural areas are timely.

The announcement in Circular 283* that control over the amount spent on projects up to £10,000 is to be abolished should enable work to commence on a large number of humble buildings which nevertheless will mean a great deal in the life of country people.

The accent is on economy. "The Minister proposes to relax the present restrictions on direct grants to voluntary bodies and local authorities under the Physical Training and Recreation Act 1937, and the Social and Physical Training Grant Regulations towards the capital cost of village halls, community centres and youth clubs. He will also be prepared to consider applications for grants under the Physical Training and Recreation Act 1937 for the development of playing fields; and to consider proposals from local education authorities for helping any of these services by minor building projects. Grants under the Act of 1937 and the Social and Physical Training Grant Regulations will be administered so as to make sure that the funds available are used to meet specially urgent needs, and the Minister will not be able to approve for grant relatively large and expensive projects unless they can be justified on some quite exceptional grounds.

"In considering proposals for building for these services the Minister will need to be satisfied that the greatest possible use is being made of buildings that are already available. For example, the needs of a community centre or youth club can often be met by putting up an annexe attached to a school or college of further education, or built on a nearby

site so that advantage can be taken of existing facilities. In addition, when the school population falls, it is possible that some school buildings will become redundant, which would be suitable for young people and adults. Local education authorities are asked to bear this in mind and bring such buildings to the notice of voluntary bodies likely to be interested."

The picture this conjures up is of the kind of village hall so accurately depicted by Giles in his *Daily Express* cartoons. There is a very wide range, architecturally, between the extremes of this type of building. The worst are dreary huts which need great local enthusiasm to overcome their discomfort and inadequacy. The best community centres are good examples of modern architecture and ornaments of their villages.

Since the long-term policy must be to maintain and encourage rural life and to offer sufficient attractions to prevent the young people from moving to the towns, the importance of the new M.o.E. Circular is very considerable and its encouragement of vocational training is splendid. But on many housing estates and even in new towns, the tenants are begging for more community buildings so that a really vital social life can be started. The new relaxations will be in the nature of half a loaf; and are to be welcomed in the same spirit.

It might be valuable if a survey were carried out in sample villages to find out if there is any connection between a healthy and happy community and its communal buildings. Architects who may not be able to design the buildings they would like to see put up, will nevertheless be able to give valuable advice as counsellors, and if necessary to give a lead in demanding more capital investment in rural education and community life. The whist drive in the Nissen hut is not really Merrie England.

* Fuller details of Circular 283 are given on page 746



Professor A. E. Richardson, P.R.A., F.R.I.B.A.

EVENTS AND COMMENTS

PEEKING AT CHINA

It seems to me that the Chinese government has been amply repaid for its generous hospitality to the "cultural mission" of which Sir Hugh Casson was a member. Many of us have read him in the *Observer* and Mr. Rex Warner in the *Sunday Times*; we have heard Professor Ayer on the radio, and we may have heard them all at the I.C.A. We have yet to see whether the Chinese scene has had any influence on Mr. Stanley Spencer's painting. The Architectural Association, anxious to hear the first-hand views of its Past President, packed its dining-room as never before, last week. No one could possibly complain that he did not get his money's-worth from that evening for Sir Hugh spoke for two and a half hours, illustrating his

stories and the results of his eagle observation with charcoal sketches. Indeed, he had so much to say about Russia that we did not arrive in Peking for an hour and a half. Had he been given a breather at that stage I would have enjoyed the remaining hour more, for although I know of very few people whose travel gossip is half as good as Sir Hugh's, I found that concentration after a good dinner falls sharply away when the chair becomes hard and the atmosphere third-hand and filled with tobacco smoke.

However, Sir Hugh was not the champion speaker at the A.A. last week, for Mr. T. H. H. Hancock, Senior Architect, Colony of Singapore, on Wednesday gave a paper on George Drumgoole Coleman and his successors lasting three hours, and including nearly a hundred dates, but that is another story.

EXHIBITION AT READING

The Berkshire Society of Architects has organized an exhibition of members' work in the recently very much improved galleries of the Reading Municipal Library. The arrangement of such an exhibition is always most difficult if personal feelings are to be respected and the profession of architect to be presented in the most favourable light. The object of the exhibition was to show the public the type and comprehensiveness of work carried out by local architects and this it did extremely well. Bearing in mind that no two drawings or photographs were the same size or presented in the same way, the exhibition was very well arranged.

Unfortunately, at the time of my visit the room devoted to the development of the new town of Bracknell was closed, although I was able to see a model of the centre of the town.

The Berkshire Society is working very hard to make the public conscious of the architect's place in society and is to be congratulated on this exhibition.

THE A.B.S. BALL

In writing an account of a party one's personal enjoyment or dislike of it is bound to play a large part. Undoubtedly there were persons at Grosvenor House last week who hated every minute of it. I was not among them. The A.B.S. Ball was, once more, a great success. The organizers were, on the face of it anyway, justified in moving from the overcrowded Dorchester to the vastness of the ex-skating rink "Great Room" of Grosvenor House. Perhaps they did not sell as many tickets as they had hoped but at no time was the floor really uncomfortably crowded. The band was lively and loud and there was the minimum number of interruptions to the dancing. As always, it finished too soon. I hope that the A.B.S. will find that it has done well and that, encouraged by their enjoyment of the Ball and their reading about others' enjoyment of it, every architect on the register will send a special Christmas gift to the general fund of the Society.

TROILUS AND CRESSIDA

My purpose is not to appraise this opera, which I enjoyed enormously. So little has come from Sir William Walton in recent years that for some reason I feared that I might find his style changed. This was not so, for there at once was the Walton of *Faade* and the *B Flat Minor Symphony* and after the first five minutes I realized that my fears had been groundless. The opera has been acclaimed to be fine without, perhaps, being great. I am not qualified to talk about it further except to say that it thrilled and moved me deeply.

My excuse for bringing opera to this page is that Sir Hugh Casson designed the sets. There are three acts; the first before the temple of Pallas in Troy, the second in the house of Pandarus, and the third the Greek Encampment before the pavilion of Calkas. Understandably enough, the theatrical critics have dealt mainly with the music, the book and the acting, adding, usually in the last paragraph, a handful of corn to the production, the costumes and the sets. *The Times* completely ignored the visual side of the opera, and the only criticisms which I have seen of the sets appeared in the *Spectator* and the *New Statesman*. Writing in the *Spectator*, Colin Mason says that "although the second of Hugh Casson's sets (the interior of Pandarus's house) looks rather like one of

Heal's windows, and the third (the Greek Camp) is unnecessarily drab, the first, which is most important (the temple of Pallas), is magnificently impressive."

In the *New Statesman*, Desmond Shawe-Taylor, in describing the opening of the first act, writes: "... Sir Hugh Casson, for this scene, showed once again his curious preference for the side entrances to classical temples; his odd-shaped central block of masonry looked like a corner of the R.I.B.A. building in Portland Place. Pandarus lived in an attractive penthouse with slats and awnings 'by' some modish decorator—which was doubtless just right; the most imaginative of the sets was the last—the bare and sinister Greek encampment with its high towers from which the watchmen called to one another as night fell across the windy plains of Troy."

I think the design of the sets deserved handsomer notices than this, but I thought that the carrying out of the painting, particularly in the last act, was not as good as it should have been. The composition was excellent and the arrangement of ramparts conveyed to one exactly the feeling of a set of fixed defences occupied for too long. But the walls and revetments had too little texture and the result was drab.

I thought Pandarus House was frankly contemporary, and by that I mean "of now." It was, however, better than a Heal's window, although I found the row of large, square windows across the top of the set disturbing to my concentration on the interior. This may well have been a matter of lighting. The colour of this set would, I imagine, set the heart of the Editor of *House & Garden* thumping with pride. I liked the set very much, but I could not fit it to the opera in time although it made an excellent background to the character of Pandarus.

I can see Desmond Shawe-Taylor's objection to the first set, but I think his parallel is a little unfair. All the same, it is rather difficult to imagine the plan of the temple of Pallas. The set made an excellent background for the crowd scenes but, with its wide flight of steps, set the principal singers a problem when, in fits of great emotion and singing like anything, they had to negotiate them.

When I wrote of Sir Hugh's sets for *Alceste* I said how very like one of his sketches the first act was. The texture of the masonry had the texture of his soot and candlegrease technique. This time it was not so similar and I missed it. I think, though, that as a stage designer Sir Hugh Casson has already made great progress. I very much hope that he will have further opportunities to prove that in the theatre he can produce some of his very best work.

THE NEW P.R.A.

May I remind you that in September I tipped Professor Richardson as P.R.A. I reckon that he will be a wow. Unfortunately I missed his being interviewed by Gilbert Harding, but I gather that he came out of it very well, and that his greatest quality—his enthusiasm—was well to the fore.

To save your referring to back numbers I will repeat what I said in September, with the tenses altered:—

"The Professor, whose skilful restoration of St. James's Church, Piccadilly, has been much in the news lately, will make an admirable, popular P.R.A., and can be relied upon in his own inimitable way to lash modern architecture, modern painting and modern sculpture. This will be fine provided that he is not taken too seriously.

His speeches, broadcasts and appearances on television will bring the house down with their wit and enthusiasm, but whether they will do very much in the cause of the development of the arts is another matter. As an expert on 18th-century architecture and craftsmanship, Professor Richardson is in a class by himself; he is also a fine water-colourist in the traditional manner and a famous collector."

A friend of mine years ago at the Bartlett had designed a classical dome. The professor, accompanied by the senior lecturer, was touring the studio. He looked at the dome. "Look," he said, "profile, profile" (running his pencil down his profile) "Corfiato! A future Lutyens!" In this particular instance the professor was wrong.

I feel that no one will make fuller use of the coming year than the new P.R.A. Congratulations, sir!

THE LATE CYRIL FAREY

When I was a student there was virtually no other academy perspectivist. His recorded perspectives number over 3,500, of which between 500 and 600 were "hung." This is a prodigious total. In these days his particularly accurate sunshine after a heavy shower technique is slightly frowned upon, but his drawings must have pleased many a client—and many an architect. An interesting thing about his work was that he always took great care with the figures and vehicles in his drawings. These foregrounds are now beginning to have a historical interest and this was clearly brought out in his drawing of Oswald Milnes extension to Heals which was recently on show in the Brixton School Exhibition at the Building Centre.

ABNER

NEWS OF THE WEEK

The Worshipful Company of Tylers and Bricklayers have awarded their annual Gold Medal for the best brick building erected in London within the last three years, to Mr. John Murray Easton, in respect of the Students' Hostel of St. Bartholomew's Hospital Medical College, Charterhouse Square.

Licentiates, R.I.B.A.

Since January 1, 1934, the class of Licentiates has been open only to those whose names are on the register maintained by the Architects' Registration Council of the United Kingdom. As from August 1, 1940, admissions to this register on a practice qualification, apart from a few exceptions under Regulation 26B, were discontinued and only those who qualify by the examinations recognized for the purpose may be admitted to the register. These examinations are identical with those which qualify candidates for the Associateship, R.I.B.A.

There has, therefore, been a period of 21 years in which persons holding a practice qualification have had the opportunity to apply for election as Licentiates.

By resolution of the Council in accordance with Byelaw 7, further admissions to the class of Licentiates will be discontinued as from December 31, 1955.

Leeds School of Architecture—Old Students' Association

A reunion of past students was held at the Great Northern Hotel, Leeds, on November 27, 1954, and was attended by 75 ex-students of the school. Mr. F. Chippindale, Dipl. Arch.(Leeds), F.R.I.B.A., head of the school, was in the chair.

It was decided to hold two meetings annually, one for past students only and one to include guests.

Professor J. S. Allen, B.Arch. (L'pool), M.T.P.I., F.R.I.B.A., was elected president and A. V. Montague, Dipl. Arch.(Leeds), A.R.I.B.A., hon. secretary-treasurer. Notices regarding

the next meeting will be issued in due course to all who returned the previous circular. Others interested should contact the hon. secretary, at Bank Buildings, Hyde Park, Leeds, 6.

L.M.B.A. President's Christmas Message

The following message, which he has asked them to pass on to their members, has been sent to his Area Chairmen by the President of the L.M.B.A., Mr. R. S. Williams:—

"The year that is passing has been one of real progress. The rebuilding of the City of London is now well under way, and the recent release of the building industry from licensing controls, which we have long been waiting for, presents us with a new challenge and a new opportunity. Advance planning by the building owner and his architect should now be more practicable, and this should enable us to organize our jobs from the start. This should make a substantial contribution towards the reduction of building costs, which is still our most urgent problem if we are to maintain full employment and prosperity in our industry.

"The active steps we have taken to encourage the recruitment of apprentices have borne fruit, while the opening of new training courses for foremen will assist in providing the industry with a better equipped supervisory staff in the years to come."

Illuminated Sign Competition

The first illuminated sign design competition to be held in this country, and sponsored by the Electrical Sign Manufacturers' Association, is to be judged by the following panel:

Sir Hugh Casson, R.D.I., M.A., F.R.I.B.A., F.S.I.A.; Mr. Misha Black, O.B.E., F.S.I.A., M.Inst.R.A., nominated by the Council of Industrial Design; Mr. E. H. Doubleday, O.B.E., F.R.I.C.S., M.I.Mun.E., President of the Town Planning Institute and County Planning Officer for Hertfordshire; Mr. Norman Moore, M.A., President of the Advertising Association; Mr. J. H. G. Pearce, Chairman

of the Electrical Sign Manufacturers' Association.

Considerable interest has been shown so far in the competition, and a large entry seems certain. Over 1,000 copies of the rules and entry form, and some 400 copies of the perspective drawing and site plan have been sent out by the Association.

The competition, which is open to all, has three main purposes:

- (1) To foster an improvement in the design of illuminated signs.
- (2) To encourage young designers to take an interest in illuminated sign design technique; and
- (3) To create a better appreciation of the value and importance of illuminated signs for identification and advertising purposes.

The closing date for entries is January 31, 1955. The prizes (first £100, second £50, and three of £25, at least one of which will be awarded to an amateur designer) will be presented at the E.S.M.A. Annual Lunch on March 9.

CORRESPONDENCE

British Weather

To the Editor of A. & B. N.

SIR,—It continually amazes me how so-called modernists still adhere to their crazy notion that it is good to see as much weather as possible when indoors. Will nothing convince them that a feeling of enclosure is welcome?

Your leader of December 9 might also convince some of them of the vulnerability of flattish roofs covered with light sheet materials. Fashion is always foolish.

I am, etc.,
EDWIN GUNN.

ADDENDA

In our issue of December 2, illustrating the Margaret McMillan Training College, the name of Marryat and Scott, Ltd., Lift Manufacturers, was omitted from the sub-contractor list.

Little Plumstead Hospital Extension

On this building, published in last week's issue, the cement glaze was done by Robbs Cement Enamel Finishes, Ltd.

IN PARLIAMENT

South Kensington Changes

The Government's plans for enlarging the provision for technological training and study include the expansion of the Imperial College of Science and Technology in South Kensington. When the decision to do this was announced in Jan., 1953, it was stated that the plans involved giving the College first claim on those parts of the rectangular island site in South Kensington (lying between Prince Consort Road and Imperial Institute Road) which it did not already occupy.

How this is to be done was explained to Parliament on Dec. 7. The Marquess of Salisbury, as Lord President of the Council, is responsible for scientific and associated matters, and in the course of a debate on technological education he said the building work was already in progress on the northern part of the South Kensington site—work of the order of £1,200,000, including equipment. Further progress would soon require the release of some other parts of the site from their existing use. The displacement of those activities and their re-housing elsewhere had presented difficult problems, but with the help of the Minister of Education and the Minister of Works they could now see the way clear.

The Chancellor of the Exchequer had authorized new building work to proceed in Bloomsbury to enable existing London University activities (such as the Warburg Institute) to be transferred there in due course from South Kensington. To release the accommodation now occupied by the Aeronautical collection of the Science Museum approval had been given for the erection of part of the north section of the Natural History Museum and the completion of the centre block of the Science Museum. These of course were very worthwhile museum developments in their own right.

To reduce to a minimum the disturbance to the Indian collection of the Victoria and Albert Museum plans have been approved, involving some building, which would enable a substantial part of this collection to be permanently on view in the main building of the Museum. Alternative accommodation would be needed eventually for that part of the Royal College of Art housed in the same building as the Aeronautical collection. But this was not an immediate problem. Nor did any difficulty arise over the Royal College of Music, which would remain in its present premises. Their remained the important question of the future of the Imperial Institute. The Government were actively considering this in relation to the Imperial College plan, and hoped to reach an early decision.

Lord Salisbury rejected the idea of a technological university as not a practical possibility, maintaining that the right policy for development of technological education in the foreseeable

future was to build up and develop certain existing institutions. In addition to the "massive expansion" of Imperial College the Government's plans provided for major developments at Manchester, Glasgow, Leeds and Birmingham, for developments on a fairly large scale at Cambridge and Sheffield, and specialized developments at other centres including Edinburgh, Newcastle, Southampton and Swansea. Capital expenditure and liabilities against public funds for buildings and equipment incurred in recent years amounted to £10 millions. The Chancellor of the Exchequer had just authorized further building of £1 million, in addition to the normal university building programme for 1955-56, and would be prepared to consider the starting of other projects in the following year. The total cost of technological projects over the next 10 years might be £15 millions.

On the future of the Imperial Institute, Viscount Hudson, chairman of the Governors, said that if some new body to take over the organization of technological education was to be established in London there were strong arguments for it taking over the Imperial Institute site, and he was prepared to see this happen after an alternative building had been provided for the Institute. There was a good site available on the South Bank, for which he had some preliminary sketches. A building worthy of the site could be erected near the Festival Hall. The site of the Imperial Institute was worth about £1 million, and he was advised they could erect a satisfactory building for that sum.

New Town Architecture

The New Towns Bill, which increases the amount of money for new towns from the £150 millions under previous Acts to £250 millions, was given a second reading in the House of Commons on December 10. Mr. Deedes, Parliamentary Secretary to the Ministry of Housing and Local Government, said the new towns—12 in England and Wales and two in Scotland—were not yet half finished, and it was hard to forecast the final cost, but it seemed that the total Exchequer expenditure would be about £300 millions and might be £325 millions. The new towns had not attracted private developers as had been hoped. Industry had begun slowly, but progress was being made. There were 118 factories, covering 3,000,000 sq ft and employing 16,000 persons, completed; and another 74 factories to employ 74,000 people being built. There was less diversity than the Government would have liked. Office building had been slow because of disappointing demand, and the sale of houses had been disappointing, only 57 having been sold and 348 sites disposed of up to the middle of this year.

In the town centres there were 290 shops being completed and 276 under construction.

Mr. G. Lindgren, a former Labour Minister, criticized the quality and standard of the housing in the new towns, and the density. The new houses at Welwyn, he said, had been described as appalling. The Ministry was forcing the corporations to develop at 16 and 17 to the acre. Mr. Graeme Finlay said there were 230 varieties of houses in the new towns, and some of them were not too pleasing. Like a certain portrait presented to the Prime Minister, they were powerful rather than graceful. Modern architects might well study the work of their predecessors.

Planning Act Date

Mr. J. Enoch Powell asked the Minister of Housing and Local Government whether he could make any statement about the date when the Town and Country Planning Act, 1954, would come into operation.

Mr. Sandys stated that he had made an order appointing January 1, 1955, as the date of commencement of the Act for all purposes. He had also made regulations governing the procedure for applying to the Central Land Board for payments under Part I of the Act and for claiming from the Minister compensation in respect of planning decisions. (Dec. 6.)

Cost of Schools

Mr. King asked the Minister of Education to raise at once the permitted cost per place for new school building. He said that adjustments to the permitted cost continued to lag behind the constant rise in labour and materials charges, and that many areas—especially those adopting the type of construction recommended by the Ministry—found it difficult to get their costs within the permitted figures. Sir David Eccles said that his impression was rather different. The improvements in building, which had been admirable, had in many cases allowed the increase in normal building costs to be absorbed, and that the present limits were all right. He also stated that the total value of major projects in the 1954-55 school building programme was about £48 millions, and of minor projects about £6,500,000. (Dec. 9.)

Mortgage Guarantees

The Parliamentary Secretary to the Ministry of Housing and Local Government informed Mr. Page that 772 local authorities had resolved to operate the two schemes of guarantee for 95 per cent mortgage for house purchase. Mr. Deedes added that a number of points of difficulty had arisen, as might be expected in a new scheme, and a further circular giving guidance was in preparation. (Dec. 7.)

M.O.E. CIRCULAR 283 School Buildings

The Government has decided to make additional resources available for investment in educational building. In particular, control over the amount spent on projects up to £10,000 is to be abolished, action will begin at once to reorganize all schools in rural areas, and the scope of building for vocational education will be enlarged.

Primary and Secondary Schools

Effort has hitherto been concentrated on the provision of new places to match the increase in the school roll and the movement of families to new housing areas. These must be regarded as firm commitments and will continue for several years to make heavy demands on resources.

Enough new primary places are under construction to provide for the increase in numbers expected between now and the peak in 1956. So far as primary education is concerned, this means that the programme will consist mainly of schools required for new housing areas which cannot reasonably be served by existing schools either by adjusting catchment areas or by the use of transport.

The bulk of the new building must be for secondary school pupils, whose numbers are likely to increase by over 700,000 between the beginning of 1954 and the end of 1960.

Rural Reorganization

The Minister considers it important that as the rise in the school population progressively affects secondary education, the rate at which all-age schools are being eliminated should be speeded up. In urban areas especially, reorganization has made considerable progress since the war as a by-product of building to keep pace with new housing and the increase in the school roll. This process will continue and will be assisted from 1956 onwards by the decline in the primary school

population. At this stage the Minister, therefore, desires particularly to assist the rural areas, and especially those which have not been able to benefit from the building policies hitherto in force. He therefore proposes as a first step to add to the 1955-56 programme as much work for the reorganization of secondary education in rural areas as can be started in that year. County authorities are asked to inform the Ministry not later than January 15 of any projects of this type which can be started on the site by March, 1956, indicating the approximate date by which they expect to be able to start building and the all-age schools which would be reorganized as a result. Such projects may be deferred instalments of schools already included in the 1955-56 programme, new schools whether or not included in the Reserve list of that programme, or extensions to existing schools.

County authorities will also be asked to say what further work they propose to start in 1956-57 for the reorganization of secondary education in rural areas. It is confidently expected that all the work needed to complete reorganization in the countryside will have been begun within five years from now.

The Minister has decided immediately to raise the limit of cost for individual minor projects from £7,500 to £10,000 and simultaneously to abolish the limit on the total value of minor projects which may be started in any year. Local education authorities are asked to continue to observe the current limits on capital expenditure out of revenue (other than school meals expenditure).

Voluntary Schools

Voluntary school projects to meet the needs of new housing developments or the increase in the school population will continue to rank for inclusion in Authorities' building programmes.

Relation to Development Plans

The Minister assumes that when proposals are being worked out for particular schools account will be taken of the changes in circumstances which have

occurred since the Development Plans for most areas were completed.

Size of Secondary Schools

For the time being, the only categories of new school building permitted will be those described in the preceding paragraphs. Authorities should remember that the number of children for whom they will have to provide will decline rapidly after the period of peak pressure. For this reason, the Minister asks them to continue to calculate the size of new secondary schools on realistic assumptions about the size of classes and on the basis set out in the Appendix to the Circular.

Playing Fields for Schools and Further Education Establishments

The Minister will now be prepared to consider projects for the development of school playing fields, whether major or minor projects are involved and whether they are to serve new or existing schools or establishments of further education.

Further Education

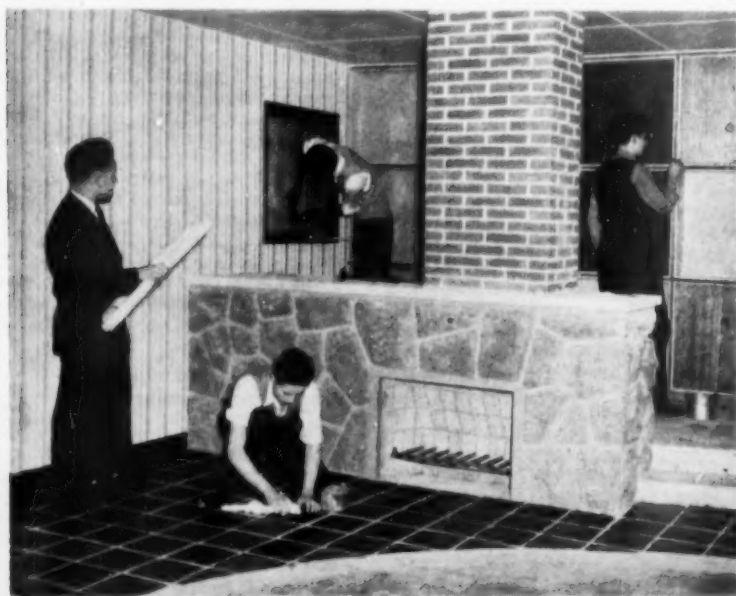
The Minister attaches great importance to the expansion of facilities for technical education, and, therefore, proposes to remove the restrictions which limit provision to a number of industries. He wishes to see additional accommodation provided for a wider range of vocational courses, and in particular he is anxious that certain major colleges should be able to shed their lower grade work and have more freedom to provide for advanced technology and research. Accordingly, the 1956-57 programme will be increased and local education authorities will be asked to propose projects for inclusion in that programme. In the meantime, the Minister will be prepared to consider adding to the 1955-56 programme deferred projects or instalments of projects, whether or not included in the Reserve List of that programme, and also projects which will provide accommodation for courses of a type hitherto not allowed, provided that work can be expected to start by the end of March, 1956. Local education authorities are asked to inform the Minister not later than January 15 of any projects of these types, indicating the approximate date by which they expect to be able to start building.

Youth and Adult Welfare

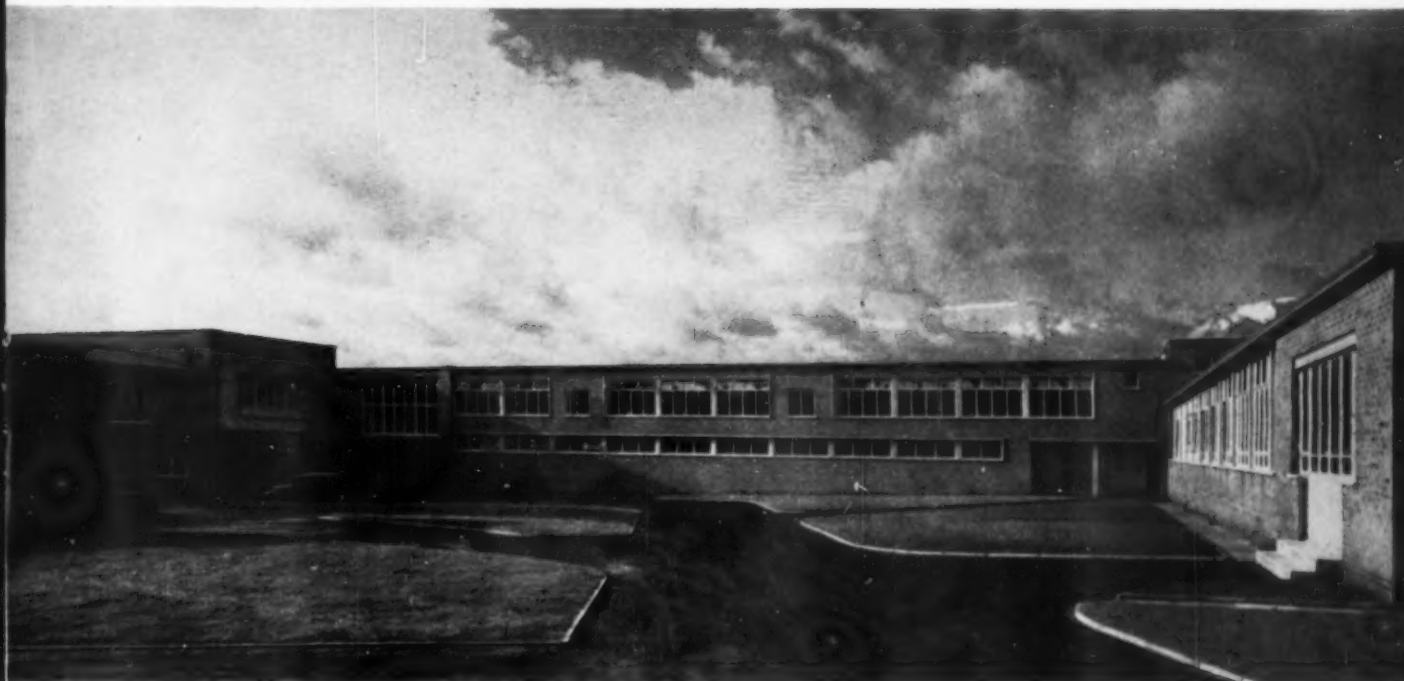
The Minister proposes to relax the present restrictions on direct grants to voluntary bodies and local authorities towards the capital cost of village halls, community centres and youth clubs. He will also be prepared to consider applications for grants for the development of playing fields; and to consider proposals from local education authorities for helping any of these services by minor building projects. Grants under the Act of 1937 and the Social and Physical Training Grant Regulations will be administered so as to make sure that the funds available are used to meet specially urgent needs and the Minister will not be able to approve for grant relatively large and expensive projects, unless they can be justified on some quite exceptional grounds.

In considering proposals for building for these services the Minister will need to be satisfied that the greatest possible use is being made of buildings that are already available.

In an Appendix to Circular 283, advice is given on the way the sizes of Secondary Modern Schools should be determined at the present time.



The 50th anniversary exhibit at the School of Building, Brixton. The boys are giving demonstrations of the different trades taught at the School.



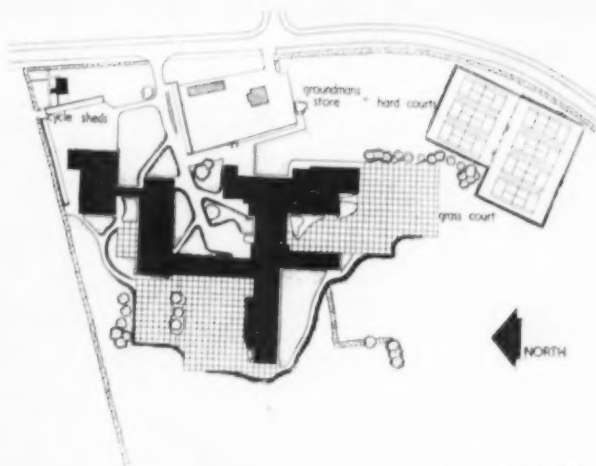
The front of the school and main entrance

**TECHNICAL
HIGH SCHOOL,
GORLESTON,
for the Great Yarmouth
Education Committee**

architect:

F. JACKSON, A.R.I.B.A.,

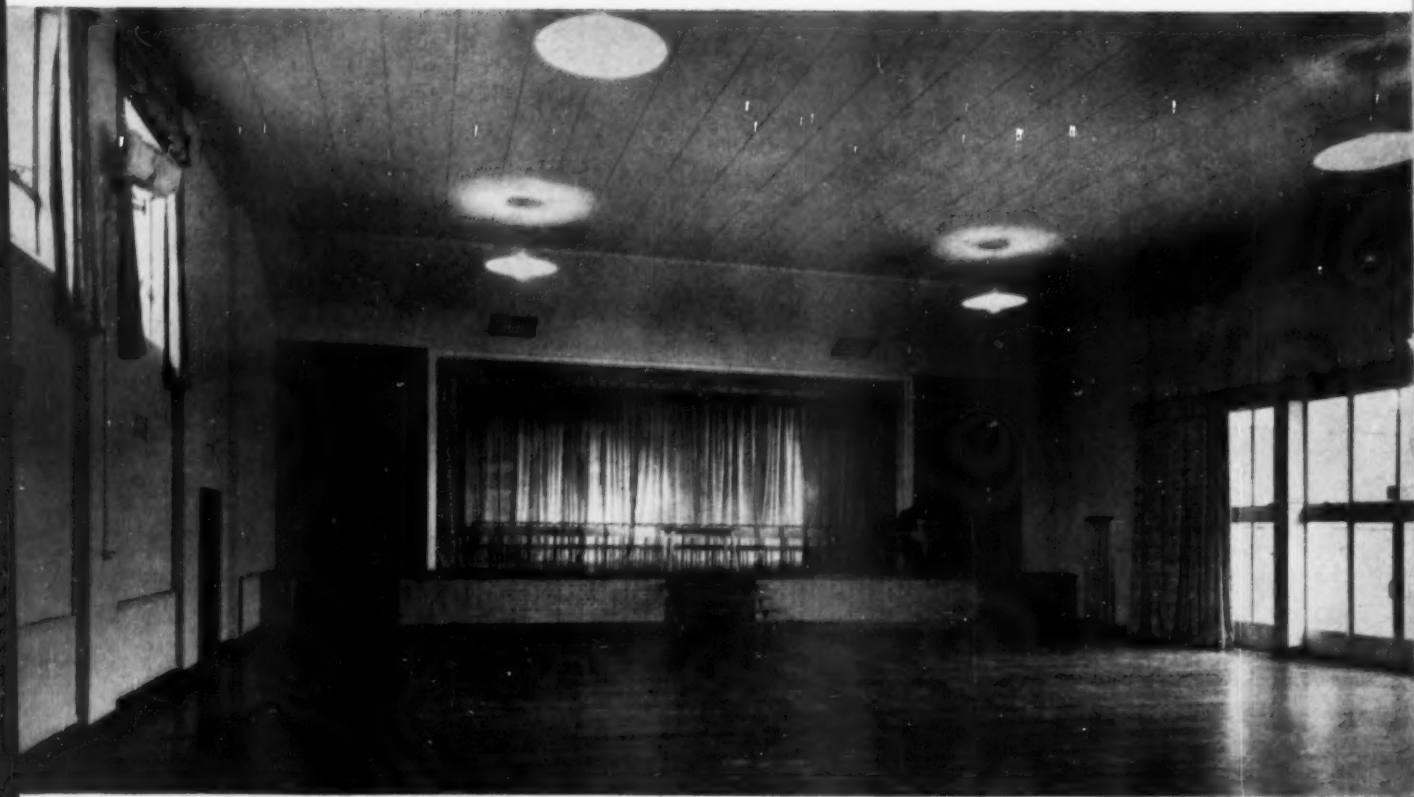
Schools Architect



BLOCK PLAN

THE school, which is designed to accommodate 680 children, is the first mixed four form entry technical secondary school to be designed in this country, in accordance with the prescribed standards of the 1944 Education Act. The school has 13 classrooms, 17 practical instruction rooms, large assembly and small halls, library, gymnasium, kitchen, dining room, administrative and sanitary accommodation. The area of the site is 20.886 acres, most of which is below the adjacent sewer drainage level in Oriel Avenue, which accounts for the siting of the school buildings as near as was possible to the north-eastern boundary. This siting also enables

the maximum amount of playing field development. In this position the school entrance is placed at the most convenient point of access to the site, and the road from it economically serves both the kitchen and workshops, and leads direct to the main entrance. Adjacent to the site entrance is the caretaker's house, the principal rooms of which face south. This main school entrance has been planned as the school focal point at the junction of the main lines of circulation, since from it there radiates the assembly hall, gymnasium, dining room wing, the administrative or staff wing, form rooms, and the library. This main entrance, with its concourse



Assembly Hall



*Dining Hall showing
Assembly Hall Stage*

Technical High School, Great Yarmouth

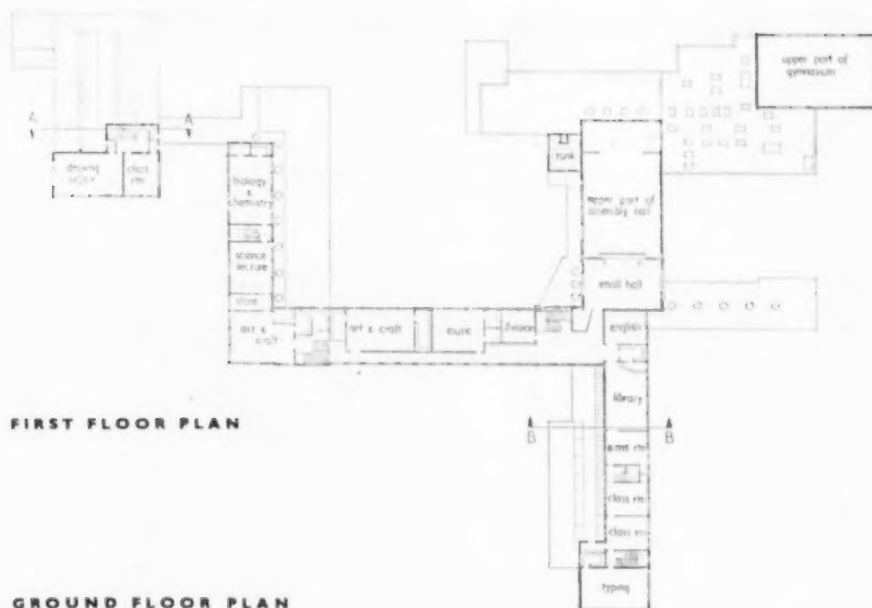
to the assembly hall, is in constant use by the children, and is used of course by visitors and staff.

A feature of the assembly hall, gymnasium wing is that the stage forms part of the dining room and is also used for circulation to the gymnasium, the changing rooms of which also serve as stage dressing rooms. The playing fields are directly accessible from the gymnasium. On the first floor above the entrance hall is the small hall which is provided with sliding doors opening onto the

assembly hall, which enables it to be used as a balcony.

Excluding the gymnasium, dining room, assembly hall and workshops, which are of steel framed construction, the single-storey parts of the school have load bearing brick walls supporting prestressed and ordinary reinforced concrete felt covered roofs.

All two-storey sections of the school and the single-storey section containing the Science Laboratories are in steel framed construction with "Ruberoid"



insulated steel roof decking covered with one layer of roofing felt. The suspended floors consist of precast reinforced concrete units.

Structural vertical expansion joints which, in effect, divide the whole building into several independent units, are provided at certain points. The assembly hall, gymnasium and first floor classrooms have suspended fibre board ceilings, and the acoustics of the assembly hall are corrected by acoustic plaster on the rear wall.

The external wall cladding consists of Ibstock Facing Bricks and precast concrete panel in-filling below the first-floor south classroom windows. Concrete slab units, with a Portland Stone facing aggregate are used as a facing to the small hall and staircase exteriors. A stabilized hollow breeze block has been used for all internal partitions and for the inner leaf of all cavity walls.

The floor finishings consist of thermo plastic floor

[Continued on page 752]

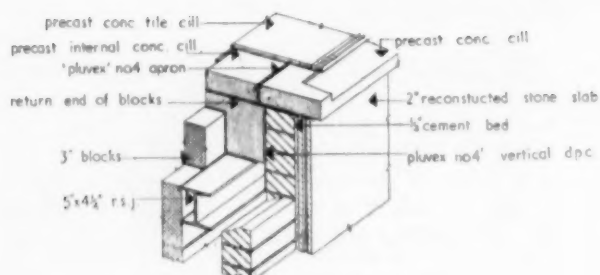


*First floor corridor
and display case*

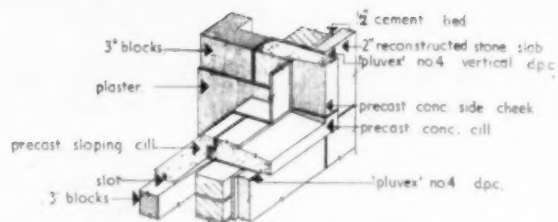
First floor landing



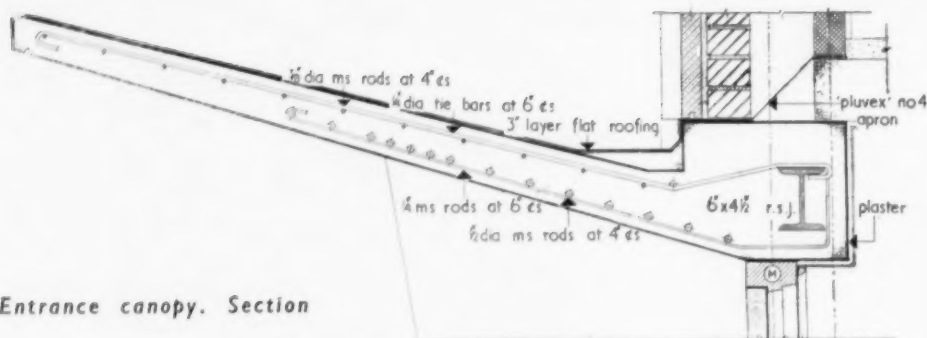
**Technical
High School,
Great Yarmouth**



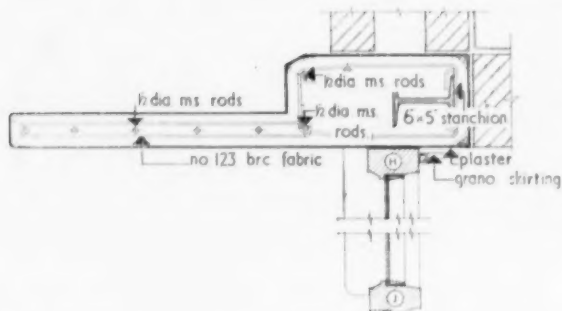
ISOMETRIC DETAIL OF BOTTOM CILL
WINDOW DETAILS. Scale: 1/4" = 1ft



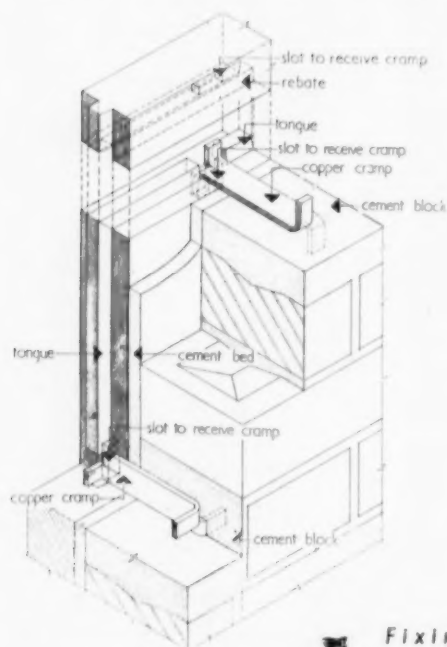
ISOMETRIC DETAIL OF TOP CILL



Entrance canopy, Section



Entrance canopy, side wing plan. Scale: 1 in = 16 in



Section through windows

Scale: 1 in = 8 in

Fixing of stone slabs

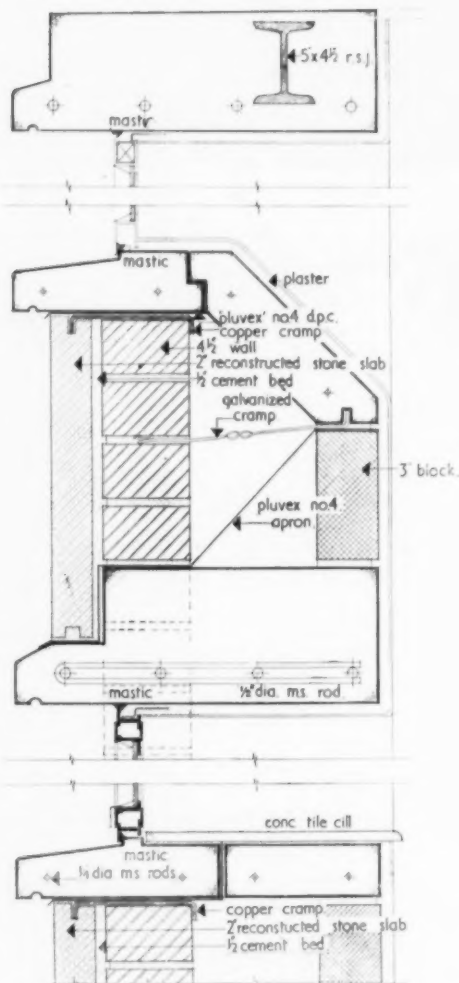
Technical High School, Great Yarmouth

Continued from page 749]

tiles in corridors and coatspaces; they are also used in the ground floor classrooms. Cork linoleum is used in the first-floor classrooms, hardwood blocks in small hall and laboratories, and cork tiles in the library. Terrazzo tile flooring is provided in all pupil lavatories and *in-situ* terrazzo on the main staircase and in shower

cubicles. The machine, plumbing and building shops are paved with Steelcrete Granolithic. Gurjon strip flooring is used in the assembly hall, on the stage and in the gymnasium, and Rhodesian teak blocks in the small hall.

Wall finishings consist of hardwall plaster with eggshell





*Main entrance
from inside
and outside*



glazed clay wall tiling at points subject to exceptional traffic. The proscenium wall in the assembly hall is covered with gaboron faced plywood on wood battens. The white line defined panels conceal pageant doors which give access to the forestage.

The stage is equipped with lighting which includes

front of house spotlights, acting area spotlights and battens, and footlights which are controlled from a stage lighting board with slider dimmers mounted on an electrician's perch.

Heating is by low pressure hot water circulated through pressed steel wall radiators and warm air circulating



Woodwork
shop

heaters from sectional cast iron boilers, which are supplied with coal fuel through front fired bunker flow-type mechanical stokers. The whole of the system is controlled by automatic thermostatic controls. Hot water for the kitchen and all lavatory basins is provided from vertical hot water storage calorifiers with heater batteries.

The cost of the school based on the contract rates, but excluding the cost of wage rate and building materials increases since the commencement of the contract in March 1951, amounts to £213,455. The nett cost per place based on the 1951 contract is £262. The Ministry of Education limit at the time of the contract was £290 per place. Cost per foot cube 3s 2½d and cost per foot super 52s 4d based on the original 1951 tender figure.

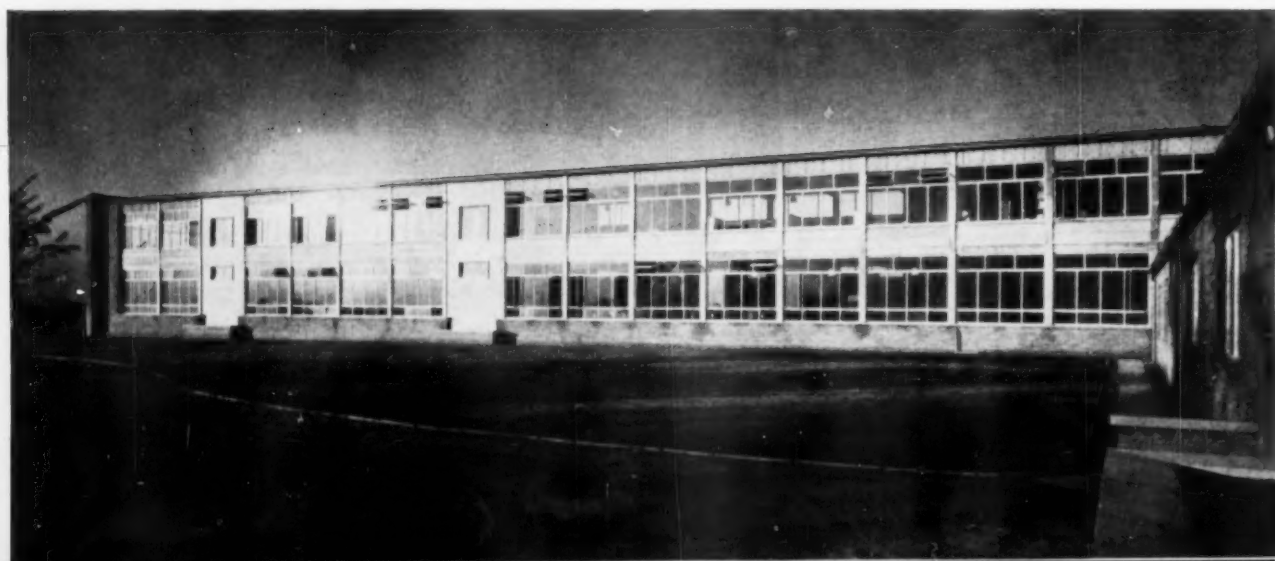
Exact site area is 20.886 acres less .012 acres required for future road widening, which reduces the nett area to 20.784 acres. Floor area per child 101 square feet.

Technical High School, Great Yarmouth



Schoolkeeper's house

Classroom wing from outside staff office





CROWN OFFICE BUILDING, TONBRIDGE

E. H. BANKS, F.R.I.B.A., F.R.S.A., Senior Architect,

Chief Architect's Division, Ministry of Works

A. M. PALMER, B.Sc., A.M.I.H.V.E., Senior Engineer,

Chief Engineer's Division, Ministry of Works

THIS block of Government Offices is one of a series of post-war structures designed expressly to house several Departments in efficient relationship to each other, and in the most economical manner within one building. In this instance, it has been possible to give expression to a changed policy on the location of Crown Office Buildings by siting the block in an area scheduled as a future Civic Centre rather than in a little-frequented back street.

On the south side the building faces on to Bradford Street, which links up with Riverside Gardens Drive, an access road giving approach on the west. At the rear is a service yard providing covered cycle accommodation; and the eastern end of the building, which is one storey only in height, fronts on to existing residential property. On the Bradford Street elevation provision was necessary for an eventual raising of the road level. This has been achieved by temporary access steps from road to a raised footway, and protective guard rails of simple design skirt the platform thus created.

The main block is three storeys in height, the single-storey eastern wing being designed to permit of extension by future additional floors if required.

Planning

The ground floor is devoted mainly to offices visited by the public, the Ministry of Labour Employment Exchange

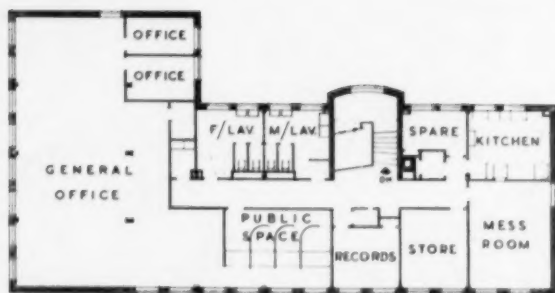
being housed at the eastern end of the building with entrances for men and women respectively at opposite ends of the wing. The Exchange counters have been laid out on the radial principle, the public spaces and interview positions being grouped on three sides around the area occupied by clerical staff who operate behind low screens. Apart from the compactness of planning possible with this arrangement the main advantage foreseen is flexibility. It is anticipated that should the necessity arise, a considerably greater volume of business than that transacted under present conditions could be handled by the staff with the facilities provided initially.

Two entrances on the south front give access respectively to: Ministry of Pensions and National Insurance offices at the western end of the building for both staff and public; and at the east end, to Ministry of Labour and National Service offices for staff. These offices comprise public space with a large clerical office behind, lighted on three sides.

Public lavatories are centrally placed, and a central staircase gives access to upper floors.

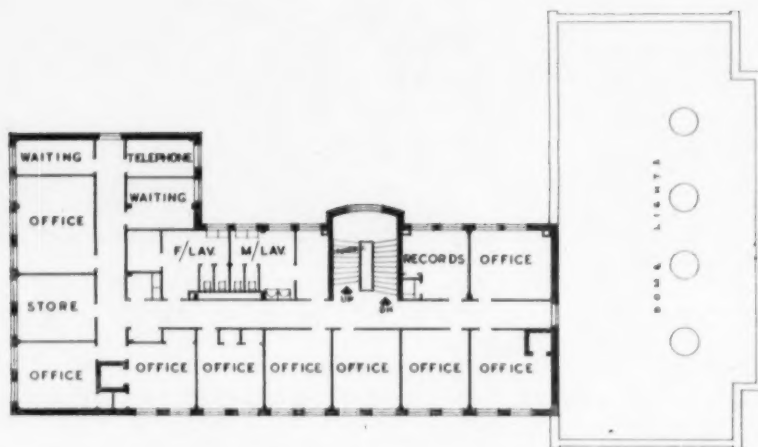
The first floor provides office accommodation for both Ministry of Labour and Ministry of Pensions and National Insurance, with a Tribunal Room and Waiting Room required by the latter in connection with hearings

[Continued on page 757]

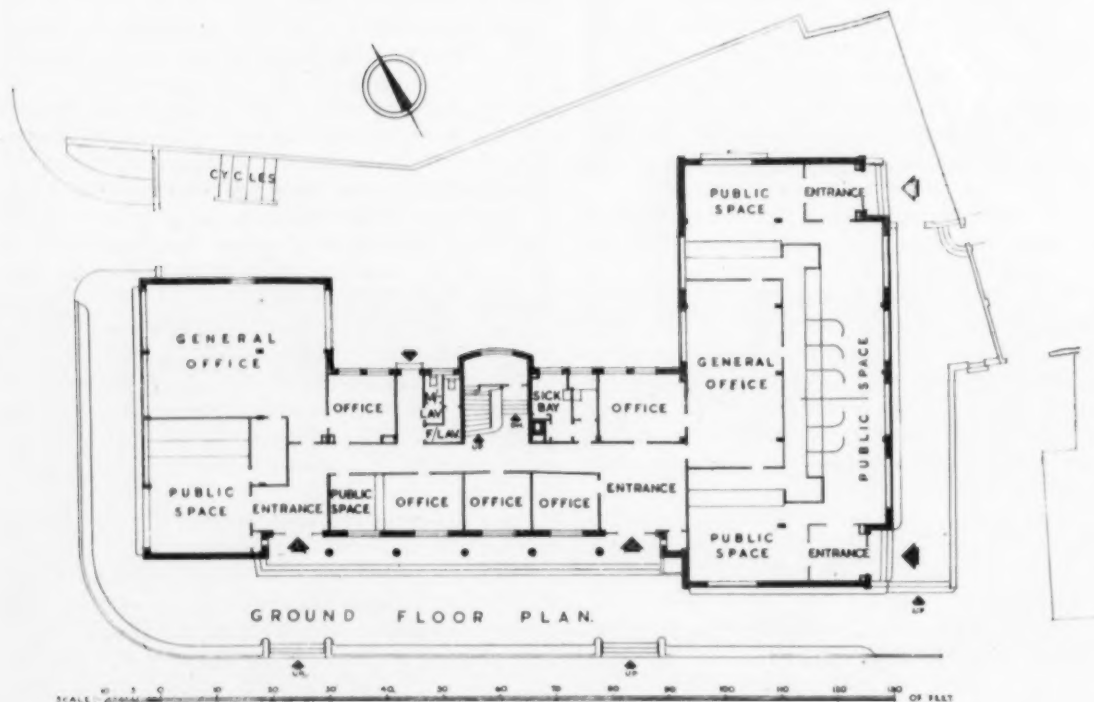


SECOND FLOOR PLAN

Steelwork Designed by:—
G. H. STEWART, M.I.Struct.E.
Senior Structural Engineer,
Ministry of Works



FIRST FLOOR PLAN



Crown Office Building, Tonbridge

involving attendances by members of the public. Staff lavatories, for both sexes, are provided on this floor.

The second floor at the west end is devoted to offices for the Board of Inland Revenue, with facilities for interviews with the public.

Construction

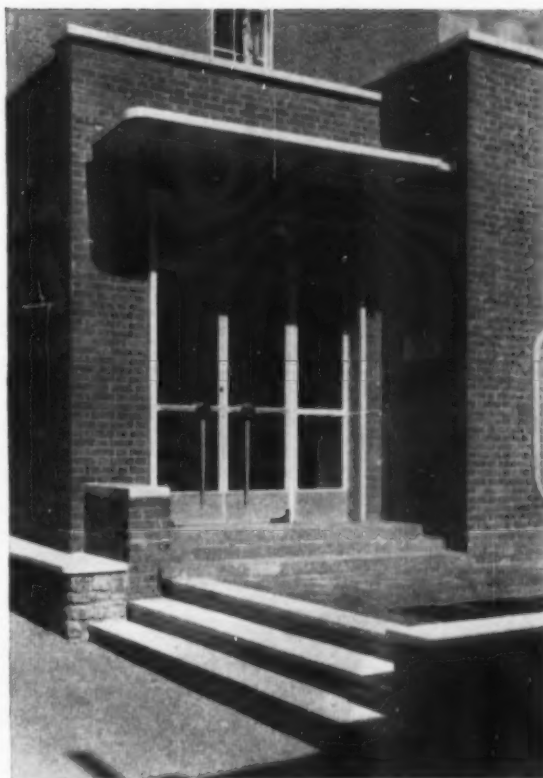
The walls principally consist of 13½ in brickwork on a plinth of Bargate rubble stone. Rubble stonework is also employed as a facing for the recessed wall of the framed loggia on the south elevation where it forms a satisfactory foil to the circular concrete columns, and is used for the "panel" wall on the south side of the eastern single-storey wing.

Natural stone surrounds to window openings enclose also fluted aluminium sheeted panels below the sills. Shaped concrete window boxes to the larger ground floor windows relieve the geometric formality of the fenestration pattern.

Finishes

The staircase, landings and dados to public spaces were treated with terrazzo. Floors to public spaces are in thermoplastic tiles, floor finishes to offices generally are linoleum.

Flat roofs consist of 3-layer bituminous felt covered with asbestos tiles bedded in bitumen. Top lighting is provided by glass dome lights. The floors and flat roof,



South-east public entrance



**Crown
Office
Building,
Tonbridge**

East wing, ground floor



including the ground floor over basement, are in hollow tile *in situ* construction. A small reinforced concrete basement has been provided and this is tanked with asphalt. The basement slab and walls are designed to withstand a head of water. The building is steel framed and the stanchions are carried on mass concrete block foundations. The walls stand on mass concrete strips cast *in situ*.

Services

Heating is provided by hot water radiators from coke-fired boilers with automatic damper control. Fluorescent lighting is provided in public rooms, tungsten lighting with Holophane fittings in other rooms and glass dome fittings in corridors and staircases.

Quantity Surveyors : C. D. Walford and Partners

General Contractor : J. C. Elkington, Ltd.

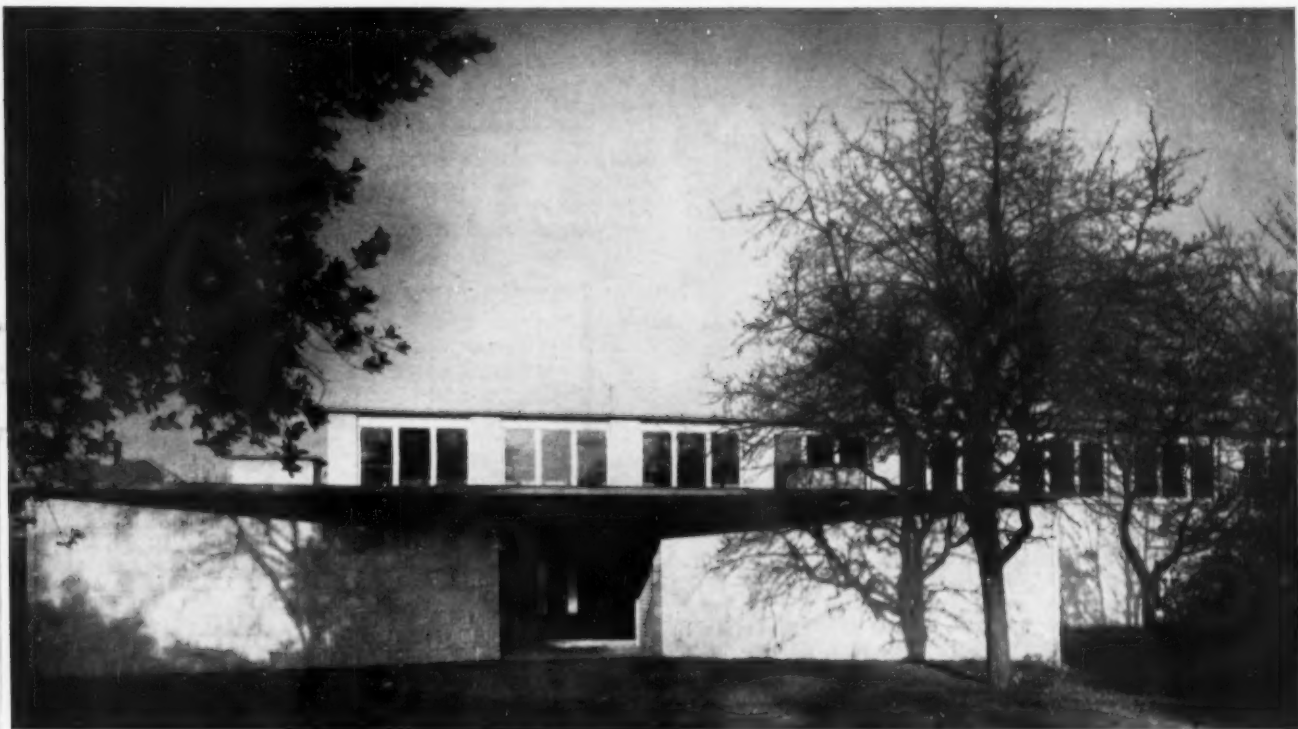
Asphalt Tanking: Neuchatel, Ltd. Bricks: Hall & Co. Balustrading, etc.: Hyders, Ltd. Cycle Stands: Alfred A. Odoni & Co. Electrical Installation: G. E. Wallis, Ltd. Felt Roofing: The Ruberoid Co., Ltd. Flagstaff: J. W. Gray & Son, Ltd. Flush Doors: Linden Doors, Ltd. Floors and Roofs: Kleins, Ltd. Glass Blk. Windows and Dome Lights: Lenscrete, Ltd. Heating and H.W.: F. Haydon, Ltd. Locks, Door, Furniture: Josiah Parkes; Everite & Co. Metal Windows and Doors: C. E. Welstead, Ltd. Notice Plates: Remploy, Ltd. Paints and Painting: Walpamur & Co.; Inertol Co. Pat. Comp. Floor Tiles: Neuchatel, Ltd. Pavings: C. A. Johnston (Aylesford), Ltd. Permanent Fencing: Fencing Co., Ltd. Plastering: E. G. Cheesman & Son. Plumbing: J. C. Elkington, Ltd. Stonework: Walton Goody, Ltd. Structural Steelwork: Smith Walker, Ltd. Terrazzo Pavings: Diespeker, Ltd.



Unemployment insurance section



Public space, west wing



The splayed main entrance faces South

SYNAGOGUE.

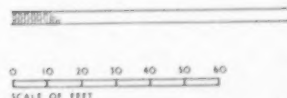
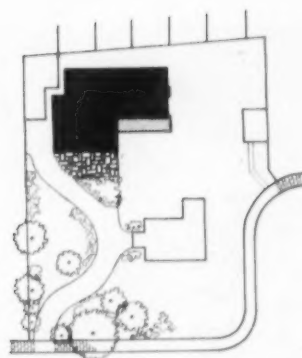
Woodford, Essex

architects:

HARALD WEINREICH & PARTNERS

assistant:

H. W. POWLEY



THE site for this Synagogue was previously a well-treed garden to a Regency house, and the property had fallen into a sad state of disrepair after requisitioning during the war. It was decided to retain as many trees as possible, which would act as a semi-transparent screen from the road.

The building itself is situated towards the back of the site, with space for car-parking at the rear, and is served by the existing drive-in to the house.

The building was planned to the combined requirements of the United Synagogue and the Wanstead and Woodford Hebrew Congregation, and has been designed to serve as a Youth Club as well as a place of worship. At the beginning of the contract, the Corridor and Minister's Room were omitted, and will be built at a later date.

The east end has been planned as a permanent Synagogue, with fixed seating, etc., and provision has been made for a movable partition at each bay so that the remainder of the Hall may be used for other purposes, such as Youth Club and socials. The kitchen, at the West End, will be used in conjunction with these latter functions.

Construction

In order to keep down cost, it was decided to build the structure of the Main Hall with prefabricated units, and standard Orlit reinforced concrete frames were used, with brick cladding.

The roof to the corridor is constructed of Myko precast concrete beams supporting woodwool slabs, which were used as permanent shuttering to the 2in reinforced screed. The final finish is 3-ply roofing felt. The remainder of the

Synagogue, Woodford

building is load-bearing cavity brickwork, with reinforced concrete roofs.

Interior

The dominating feature internally is the Ark, which is placed centrally in the east wall, this being built of dark red brickwork in soldier courses. The Ark is made in hardwood, the vertical ribs light coloured and the curved recessed panels polished dark.

The gilded wrought iron doors are designed on the Star of David motif, and they slide back in front of blue velvet panels with the same design picked out in brass studs.

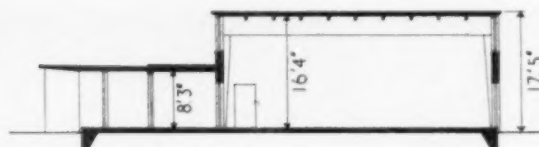
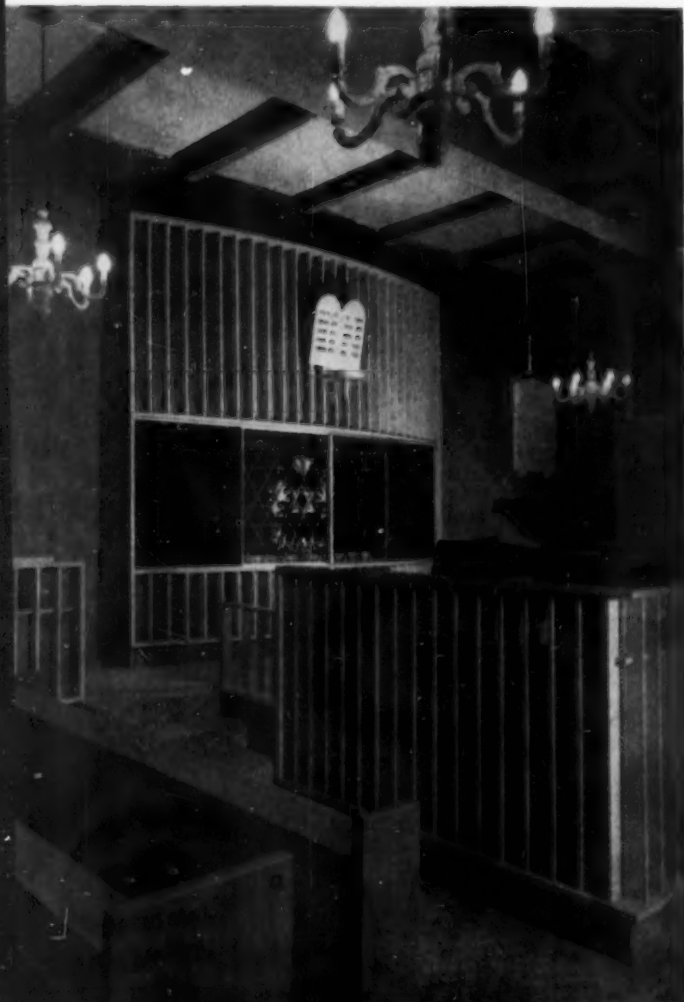
The perpetual light is a converted Merchant Adventurers' fitting, with a low-wattage neon lamp projecting underneath. A normal tungsten bulb shines upwards on to the Commandment Tablets which are of polished hardwood with bronze Hebrew lettering.

The Almemar brings forward the vertical motif of the Ark into the Hall. The balustrades being of the same material and design as the Ark. The small lectern is detachable.

The pews in the Hall are of light-coloured hardwood with dark-coloured ends. These contain hat lockers underneath the hinged seats, and the book-rests are also hinged to give more room for standing.

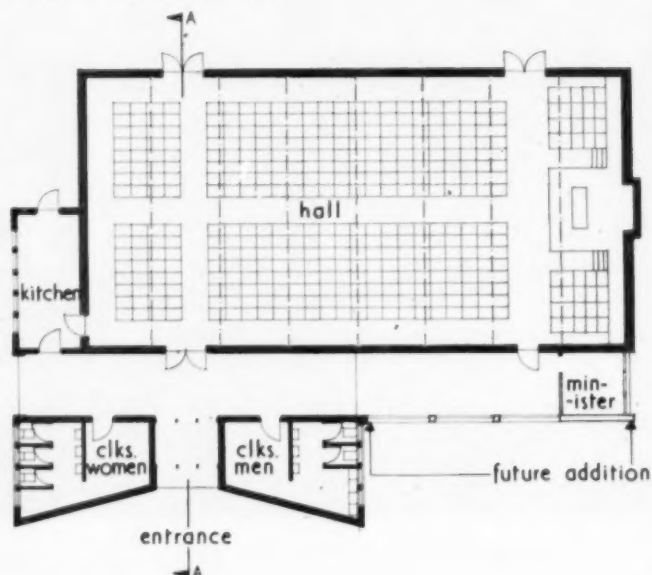
The chandeliers, which were chosen by the Congregation, match the light-coloured hardwood used elsewhere. The internal doors are the normal skeleton-cored type of flush door, with light-coloured slats planted on for decorative purposes. The floor is polished wood-block.

The Ark



SECTION AA

PLAN. Scale: 1 in = 24 ft.



Quantity Surveyor: S. Lazarus, F.R.I.C.S.

General Contractor: W. G. Wingrove and Son

Ark, Almemar, Pews, Doors and Joinery: Messrs. W. G. Wingrove & Son. Electrical Installation: Freeman Electrical Co. (London), Ltd. Flooring: S. Bennett & Son (Wood Flooring), Ltd. Hebrew Lettering: J. Samuel & Son. Ironmongery: Comyn Ching & Co. (London), Ltd. "Myko" Beams: Artificial Stone & Concrete Co., Ltd. Paints: Ferguson Edwards, Ltd. Perpetual Light: The Merchant Adventurers, Ltd. Precast Concrete Frame: Orlit, Ltd. Roofing: F. McNeill & Co., Ltd. Sanitary Fittings: Alfred Goslett & Co., Ltd. Seat Numbers: Drakard & Humble, Ltd.



Cement Economy and Improved Concrete

Some examples from a survey of Ministry of Works "End Product" Specifications

AN investigation into the standard nominal mix specifications for concrete was ordered by Sir Charles Mole, Director-General of the Ministry of Works, with a view to improving the average quality of the concrete, economizing in cement, and reducing cost by new techniques. The investigations started about four years ago and it is now possible to review some of the results.

It was decided, at an early stage in the investigations, that the standard specifications were unsatisfactory: these usually called for a nominal mix, minimum cube strength, and frequently a definite slump, irrespective of the characteristics of the aggregates which would have to be used in any particular case*. All the points in a specification could not always be fulfilled. It was therefore decided to adopt a specification giving the end product required—that is, the minimum strength of the concrete, and any other requirements such as freedom from surface defects, water-tightness, etc., as might be required for each particular job—leaving the contractor in each case free to design the mix to suit the aggregates available.

Specifications of this type were first introduced by the Ministry of Works in 1952, and since then over 60 contracts have been completed on which the concrete was specified in this manner. The results have been so successful that all contracts in which there is any considerable quantity of concrete, now contain specifications of this type. The Ministry's Directorate of Works maintains a small section which deals with questions of concrete quality and production and advises contractors, if so desired, on the proportions which can be used in any particular case.

In general, the results show that the use of a guaranteed strength type of specification, mixes designed for workability and strength to suit the aggregates, and compaction by vibration, can lead to a reduction in costs and to a definite improvement in the uniform quality of the concrete.

Below are some examples obtained by the Ministry of Works in actual practice.

Reduction of Cement

The reduction in the proportions of cement used has varied from about 10 per cent in cases of hand-placed concrete designed for 3,000 lb/square inch at 28 days, to 40 per cent in a case of high-quality concrete for prestressed work. Reductions in cement content of 15 to 20 per cent are common when vibration is used to produce concrete of minimum 3,000 lb/square inch compressive strength at 28 days.

Examples showing the trend are:—

(1) (Fig. 1.) A large office building with basements 500ft long. The whole of the concrete in these basements was of the proportion 1:2.23:6.77 by weight using an aggregate of 1½in to ¾in. The average cube strength throughout the work was 4,006 lb/square inch at 28 days. Required minimum strength for this work was 3,000 lb/square inch at 28 days and the normal mix would have been 1:2:4 by volume. As compared with this the mix actually used showed a cement saving of approximately 0.93 cwt/cubic yard, or 20 per cent.

(2) A number of large reinforced concrete structures

have been constructed where the required strength for 28 days was 4,000 lb/square inch. The nominal mix for this would have been 1:1½:3 by volume, but actual mixes used varied from 1:1.87:4.38 by weight giving a cement saving of 13 per cent to 1:2:6 by weight showing a saving of 30 per cent depending on the quality of the aggregates available.

(3) In a prestressed concrete structure the design strength for the concrete in the beams and columns was 5,500 lb/square inch at 28 days. The mix adopted was 1:1.74:4.87 by weight, giving an average 28 days' cube strength of 6,660 lb with a saving in cement of 40 per cent as compared with a nominal mix of 1:1:2 by volume.

A table is appended giving details of actual mixes used in a number of different contracts where the concrete was vibrated. To allow for variation in the materials and site supervision, the average cube strength requires to be higher than the specified minimum strength. The allowance is varied with the degree of control anticipated on each individual site.

Site	Code of Practice mix (by volume)	Specified min. cube strength at 28 days (lb/sq in)	Mix adopted			Average cube strength at 28 days (lb/sq in)	Cement saving (cwt/cu yd)
			Proportion by weight	Size of agg. (ins)	W/C ratio		
12	1:1:2	5,500	1:1.74:4.87	1	0.45	6,666	3.10
52	1:1:2	6,000	1:1.5:3.8	1	0.38	8,384	2.31
6	1:1:3	4,000	1:2.25:5.78	1	0.50	5,086	1.79
7	1:1:3	4,000	1:2.04:5.01	1	0.48	5,285	1.31
21	1:1:3	4,000	1:2.0:6.0	1	0.45	5,691	1.79
1	1:2:4	3,000	1:2.23:6.77	1	0.54	4,006	0.93
3	1:2:4	3,000	1:2.45:6.52	1	0.51	4,607	0.93
30	1:2:4	3,000	1:2.20:6.80	1	0.56	4,319	0.93



Fig. 1

* In "Concrete Aggregates From Natural Sources," published in "Building Materials Digest" for October, 1954, it is stated: "Formerly there was a tendency to demand aggregates of gradings to suit a predetermined mix design; now there is a movement towards a more practical course of adapting the mix design to suit locally available materials, resulting concrete being of the same strength."

Other Advantages

It is not always possible to obtain results as striking as those shown in the table, but savings of 15 to 20 per cent of cement ($\frac{3}{4}$ -1 cwt per cubic yard) are normal. As a rule the characteristics of the coarse and fine aggregates available control the mix, which can be used in any particular case.

Apart from the saving of cement the advantages obtained from these designed mixes are:—

(a) saving of a few shillings per cubic yard in cost of materials

(b) the production of concretes which are denser, less liable to frost damage and less liable to cracking and crazing due to shrinkage, and

(c) it is not uncommon for a properly designed mix to show better workability than a standard mix, even though it has a lower W/C ratio.

The full advantages of designed mixes are, of course, only obtained if vibration is used, but there are similar though lesser advantages in designing mixes for placing by hand. If a concrete is to be hand-compacted it is seldom necessary to use a mix richer than $7\frac{1}{2}$:1 by weight in order to obtain a minimum cube strength of over 3,000 lb/square inch at 28 days. Mixes of this order will show cement savings of up to $\frac{1}{2}$ cwt per cubic yard.

Provided a concrete of reasonable quality is needed (that is, a concrete with a water-cement ratio below 0.6), it will, however, usually be found cheaper to use internal vibration. A good type of internal vibrator can consolidate thoroughly over five cubic yards per hour if the concrete is properly designed. At the same time, if internal vibration is used it has been found possible and economical to use $1\frac{1}{2}$ in aggregates for work on which this type of aggregate would not be permitted by the Code of Practice (e.g., where the cover is less than $1\frac{1}{2}$ in), without any tendency to honeycombing or defective surfaces.

Techniques Investigated

In the course of the work outlined above, a number of interesting techniques have been investigated which promise material reductions in cost if the work is organized properly. These include:—

- (1) The use of the power float for surface finishing.
- (2) The use of the vibrating roller for consolidating thin concrete slabs, next ground.
- (3) Striking shutters while the concrete is still green.

1. *The Power Float.* This machine (Fig. 2) was originally used for laying granolithic paving. It was found that



Fig. 2

the machine necessitated the use of a lower water-cement ratio and fewer fines than are used with normal hand-placed granolithic, which means less laitance to cause dusting. The machine also produces considerable consolidation, resulting in a harder and more durable surface. Furthermore, the process is faster; the machine will comfortably do as much work as eight plasterers in a given time.

Where the concrete of the base slab has been vibrated, a further development has been to lay the grano. immediately after the base slab has been compacted (that is, when the base slab is green), in which case the pressure of the machine knits the granolithic topping with the base concrete and the thickness of the former can be reduced to a nominal $\frac{1}{2}$ in or $\frac{3}{4}$ in. As the two layers have been found to be fully monolithic, the granolithic surfacing can be considered as part of the structural member and the total thickness reduced by this amount. Laid in this manner there is no possibility of the granolithic surface lifting, and results of tests have shown that there is no tendency to crack away from the base concrete under load.

Later work has shown that the machine can be used for producing a finished surface on any ordinary concrete slab,



Fig. 3

and it has in fact been employed to finish off concrete of which the aggregate was $1\frac{1}{2}$ in down and the aggregate cement ratio 9 to 1.

2. *Vibrating Roller.* The poker type of vibrator is not suited to the consolidation of thin concrete slabs and a search has been made for more satisfactory methods. The vibrating roller (Fig. 3) has been found satisfactory as a means of consolidating slabs made in contact with the ground up to 8 in thick, and over a wide range of mixes provided that the concrete mix is properly designed. Full consolidation throughout the thickness of the slab has been obtained with lean dry concrete of an aggregate cement ratio of 16:1, and the crushing strength of 6 in cubes cut from this slab was over 2,000 lb/square inch at 28 days.

With richer mixes (A.C. ratio of the order of 8:1) core strengths of over 5,000 lb/square inch at 28 days have been obtained regularly, so that in cases where the strength of concrete is the determining factor, it has been found possible to reduce slab thicknesses. Slabs normally designed 6 in thick have been reduced to 5 in, and where the power float has been used in conjunction with the roller, slabs originally 6 in thick, including a granolithic topping, are now made 5 in thick, including the minimum $\frac{1}{2}$ in granolithic surface.

3. *Early Striking of Shutters.* Using a properly designed

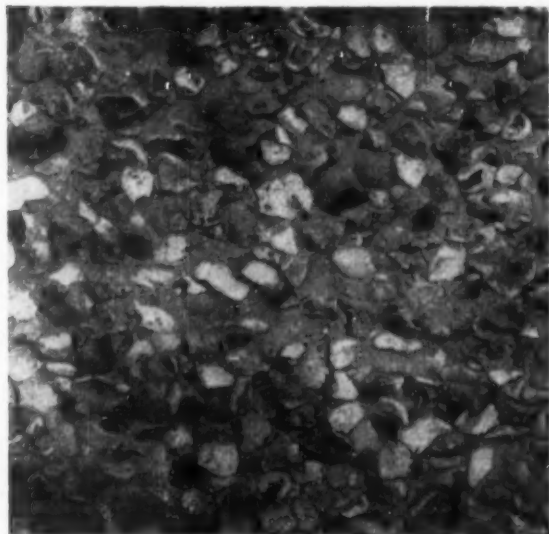


Fig. 4

vibrated concrete, it has been found possible to strip shutters at about two hours after placing. It is possible to strip much earlier than this, but because of the liability to casual damage this is not considered desirable. Provided the

shutters have been suitably designed for this purpose, any shuttering can be stripped at this stage unless there is a pronounced overhang.

The advantages which can be obtained from early striking are as follows:—

(a) The exposed surfaces can be prepared for early treatment while green. If a smooth finish is required it is only necessary to rub down with a wooden or steel float, when a surface equal to a rendered surface can be obtained, whilst if a plastered finish is required for any reason (e.g., acoustic properties), the surface can be washed off with a fine spray of water giving a perfect key for the plaster without any hacking. Again, it is possible to wash off the surface in such a way as to leave an effective finish by exposing the aggregate. An illustration of this technique is shown in Fig. 4.

(b) Joints, both vertical and horizontal, can be washed off with a fine spray of water, leaving the aggregate fully exposed to provide a perfect face against which to place further concrete.

(c) Less damage is done to the shutters during the operation of striking, and shutters can easily be cleaned by washing.

(d) If the work is such that the shutters can be used repeatedly, the amount of shuttering required for the whole job is considerably reduced. One case is known of a contractor who has consistently cast two columns 10ft high, each day from each of his forms.

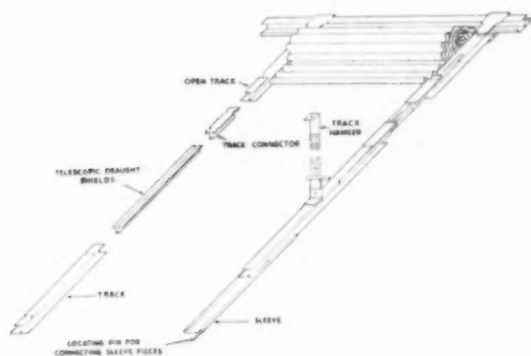
Ministry of Works Photographs, Crown Copyright Reserved

A New Suspended Ceiling

A NEW lighting system, believed to be unique in this country, has been announced by Lumenated Ceilings, Ltd., of 4, Lloyd's Avenue, E.C.3. It consists of a ceiling of corrugated translucent vinyl sheet supported in a framework of lightweight steel and suspended below fluorescent or tungsten lamps.

The Lumenated Ceiling will be particularly useful where a large area has to be illuminated, and the ceiling itself, even when the lights are not in use, presents a light and attractive appearance.

The Lumenated Ceiling can be erected quickly and simply from a few standard parts without the use of nuts and bolts, and with the minimum of cutting on site. The steel framework, which is specially designed to ensure flexibility in layout, consists of lengths of 22 gauge mild steel H-section track suspended from the existing ceiling by hangers, and held parallel at approximately 3ft centres by rigid spacer tubes. The corrugated vinyl sheet, supplied in rolls 3ft wide and up to 25ft long, is pulled along between the channels of two of the H-section tracks and held in



A motor showroom with the Lumenated ceiling

position by plastic clips. It is unnecessary to finish the structural ceiling in any way other than by painting it white.

The vinyl sheet weighs less than one ounce per sq ft and to retard the collection of dust, the sheeting is subjected to an anti-static process. When necessary the plastic can be speedily washed and re-processed by a mobile "laundry" run by Lumenated Ceilings, Ltd., which will visit an installation at the most convenient time. The sheeting does not support combustion.

When maintenance is to be carried out in connection with the lighting system, it is a simple matter to withdraw one or more of the sections of plastic sheeting to expose the lighting fittings.

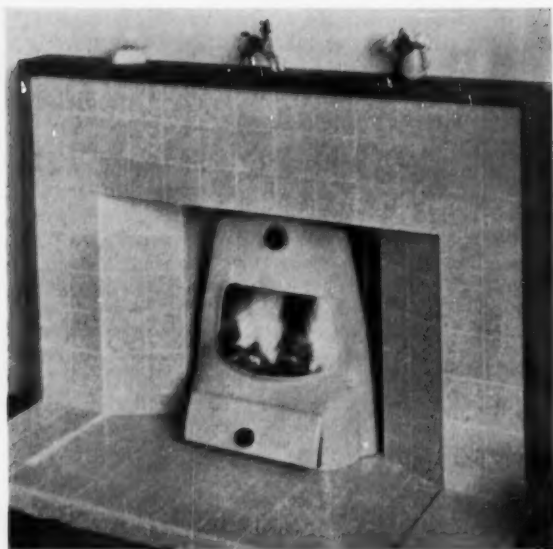
The complete Lumenated Ceiling, including the steel framework, weighs only 12 ounces per sq ft. All metal parts are Bonderized and heavily stove-enamelled to prevent corrosion.

New Domestic Heating Appliances

THE progress towards greater efficiency of solid fuel appliances, following the recommendations of the Ridley Committee's report, has been further exemplified by recent modifications of some well-known fires. The free-standing fire or stove, whether with back boiler or without, can claim a far greater heating efficiency by reason of its ability to convect heat as well as imparting it by direct radiation. The new Hurdapta free-standing convector fire is a good example; it has a restricted throat, draught control on the air inlet, ample capacity for a fire capable of heating a room 16ft x 14ft and consuming only 1 to 1½lb of coal an hour, and a large area of heating surface for the convected air currents behind.

The Hurdapta fire, which costs £10 9s 6d in cream or black and £11 19s 6d in Dark Copper lustre is sold with a short length of flue pipe, a flue register plate ready for fixing and an overnight burning plate. Extras include a removable wire mesh safety fire screen and apparatus for fixed gas ignition. Another point is that the fire is easily removable and may be lifted out in summer and the recess filled with flowers, etc.

Also recently produced is the Radiation Parkray No. 2, a modification of the No. 1, which now may be had with a back boiler. This, it is claimed, will heat all the hot water for household needs as well as a radiator or towel rail. The



Above: The Hurdapta Fire by Hurdale Ltd., 229 Regent Street, London W.1. Telephone: Regent 1051.

Right: The Siesta Stove, Model No. 4AX, and far right, the Parkray Mk. 2 both by Radiation Group Sales Ltd., Solid Fuel Division, Armley, Leeds, 12. Telephone: Leeds 38011.

Below: The XL-Talbot side-oven combination grate with architrave setting by Samuel Smith & Sons Ltd., Beehive Foundry, Smethwick 41, Staffordshire. Telephone: Smethwick 1251.



Parkray No. 2 when burning coal is almost smokeless as it burns on the down-draught principle; a large proportion of the volatile gases, which are drawn through the hot fuel bed, are burned by mixing with pre-heated air. The fire has an adjustable throat restrictor which is removable for flue cleaning, the grate has a shaker mechanism operated externally, an overnight burning plate is provided which may be used as a trivet. The finish is in Lexos porcelain enamel, either stone or fawn mottles and bronze or black lustres. This fire is designed for a room of about 2,000 cu ft with a normal output at the boiler of 9,000 B.Th.U. and is claimed to burn on average between 2½ to 3½lb of coal an hour.

The new model 4 AX Siesta fire, also by Radiation, Ltd., costs from £15 14s according to finish. The base is now only 10in deep in order that it may stand on most existing hearths, the height is 23½in. Supplied with or without a boiler with minimum maintainable output of 12,000 B.Th.U. an hour, it will heat, without the boiler, a room of about 15ft by 18ft, and with the boiler, 12ft by 15ft.

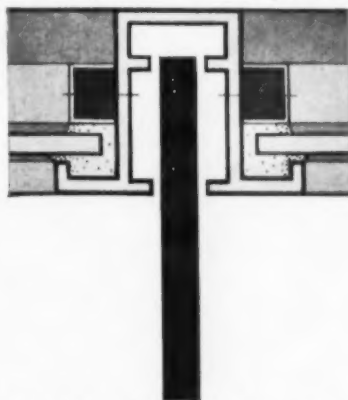
The recently developed side-oven combination grate, known as the XL-Talbot, by Samuel Smith & Sons, Ltd., has, with its new "architrave setting," been reduced in price. Available with a boiler if required, with maximum output of 12,000 B.Th.U./hour, the fire is continuous burning on most solid fuels. The size is 38in square and 16in deep with a boiler and 14in without. All part castings are vitreous enamelled, choice of colours include black, mottle brown, spring and savoy greens, biscuit, fawn and pewter and copper lustres. In addition the oven and hot closet doors and surround and hearth can be supplied tiled.



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ALUMINIUM AND ALUMINIUM ALLOY EXTRUSIONS, TUBES AND FORGINGS

The Town and Country Planning Association National Conference, 1954: Report and Commentary

TAKING as its theme "Inquiry Into Planning," this recent conference examined progress, difficulties and errors, loopholes and inadequacies of the Town and Country Planning Act of 1947 found over the past seven years. Encouraged by Mr. Deedes, M.P., the new Parliamentary Secretary to the Minister of Housing and Local Government, delegates soon found much of absorbing interest. How much more would have been gained from such an investigation, however, if the papers read had been circulated beforehand was evident from the lack of lively and sometimes little response from the audience.

Then, again, these annual conferences are not objective in resolving to press for the improvements that all have come to know so well over the years as necessary to make planning more efficient. Weary repetition only serves to emphasize a state of inertia. Now that the Development Plans are almost all submitted the time has surely come to press for a solution to the many serious obstacles to good planning.

The opening paper by Dame Evelyn Sharp gave an interesting summary of the results from the submissions of the Development Plans. "Some," she said, "have been well thought out; some, to be honest, have not."

But while it was interesting to know that 149 out of a total of 154 development plans had been submitted, that 54 had been approved with or without amendments, it was much more important to know what was to be done to make them more effective. One got little satisfaction from the contention that the 20-year limit had made them more realistic when, in the same breath, the need was acknowledged to safeguard the future lines of roads and other important essentials well beyond what is possible to achieve within that period. The "limit" loses so much, if not the whole, of its point as, indeed, most, if not all, local planning authorities had realized.

No one can possibly know with any degree of certainty when development will take place except, perhaps, when an application for permission to develop has formally been submitted or when the current year's programme of expenditure has been passed by the various developing authorities. But it is terribly important to show everything that really requires to be done to remove bad development irrespective of fictitious estimates of what is pos-

sible to achieve in a given number of years, whether it is 20 or 120 years.

Only in that way is it possible for the planning authorities to know what answer to give an applicant or what to advise the developing authorities. Moreover, no individual owner of property need then be singled out from all the rest for some threat of an advance notice of intention to purchase. He lives in divine obscurity in which all are equally threatened and none in particular, and so the market value of his property is no worse nor better than the next so far as the effects of planning are concerned. In that condition he can remain until a decision is made for the current year by a developing authority or upon the day when an application is determined by the appropriate authority.

This sort of approach could possibly remove all the criticisms of inadequate planning and hardship to owners in conflict with it and so allow the Plans to create that much-needed national pattern for good development. The leaving of so much white on plans as a policy is a grave weakness which benefits no one but the selfish speculator.

There were believed to be over 500 Town Maps yet to be submitted in addition to the 255 submitted. Since these should have been submitted three years ago it would mean that local planning authorities are suffering from inadequate technical assistance when there is plenty available. The Greater London authorities were, however, well ahead of the provincial conurbations in solving their overspill problems due to the general acceptance, with modifications, of the Abercrombie Plan. It was good to hear that density zoning was not being rigidly interpreted by the L.C.C., at least, and that quite low residential density, as a variant of the average, was being permitted in such "near in" areas as Blackheath and Dulwich in order, one hopes, to preserve the setting as well as the buildings of historic and architectural interest which are, of course, architecturally inseparable.

Planning Inquiries

Mr. J. W. R. Adams, County Planning Officer for Kent, presented his afternoon paper upon "Planning Inquiries" which are the opportunities given for objections to planning proposals or for appeals against decisions upon planning applications to be heard

in public. He stressed the undoubted value of plenty of advertising, display and explanation of planning proposals to the public.

Other pertinent points considered included the desirability of re-examining an application after an appeal had been lodged but before the public inquiry; that expert witnesses appearing on behalf of a local authority should express their own relevant professional views even if adverse to the authority's case as well as putting clearly the facts and considerations which led to the decision; and that there should be better arrangements for certain third party intervention to prevent, where justified, permissions being carried out.

At last the Ministry of Transport had "bowed to public opinion and the urgent representations of the local authorities" to give expert evidence at Development Plan Inquiries into objections to trunk road proposals as well as at appeal inquiries. The Minister of Agriculture and Fisheries still refuses, however, to do the same.

New Towns' Progress

New Town progress in terms of social and economic objectives and their value as an economic asset when complete was the subject of Mr. A. V. Williams' paper. Probably their finest prospect lay in the opportunities for a creative social life, for they were producing vigorous societies and "... not passive consumers of entertainment."

There were individual and collective financial difficulties and fine industrial opportunities but he had nothing to say upon the fundamental question of whether they were succeeding in providing for the congested cities' overspill, though it was raised by a delegate from Cambridge County Council. Central government administration still hasn't solved the problem of relating new town development directly to city central area redevelopment nor has the conflict with Board of Trade policy in industrial re-location been resolved.

As "residual legatees" of the national capital investment programme conditions of the new towns could not be compared with the freedom of the commercial developer. Unlike the latter, they incurred the burdens of investments in the unremunerative services such as the main roads, sewerage, and even water supply in some cases. An equitable apportionment among the proper authorities had not yet been made. Moreover, progress must be measured in the knowledge that the

cost of the whole range of civic equipment had to be borne at a time when rateable value was small and the profitable assets of factories and commerce were still on the drawing board.

An early adverse financial picture was made more incongruous by the Ministry's form of accounts requiring interest during the construction of projects to be charged on the revenue account instead, as in normal commercial practice, of against the capital account. Thus the most progressive new town corporation showed the greatest operating loss, until, of course, assets began to fructify. For example, Harlow is shown to have a net surplus of nearly £3,000 which otherwise would have been £25,000 surplus had interest been charged to the capital account. Similarly Hemel Hempstead would also have shown a surplus of £25,000 and Crawley a deficiency of £6,000 instead of £46,000.

With more than seven years of capital construction behind them all the new towns were building new and expanding existing industry and/or their commercial centres and within a few years many, including Crawley, expect to have a surplus on their revenue account. Assuming a reasonable apportionment of main sewerage and road costs, none would have a deficit—at least not unless one regards subsidies as a liability. If so, all were likely to show a deficit.

If the Government were prepared to regard the new town investment as money better spent than building in the congested cities (and there was no reason to suppose otherwise), rather than their value in terms of mere costing, then they promise a profitable return. For example, Crawley this year shows £7½ millions in cost of development returning 5.7 per cent.

Another difficulty experienced was in adjusting their building costs to provide an economic rent to compete with the artificial rents of neighbouring local authorities. Acute differences still occurred in counties like Durham and in South Wales, but the Scottish new towns had, with special facilities, narrowed the gap.

Tenants generally found that new town rents were higher than for the old habitat. There was, therefore, a grave danger of reducing the contribution that the eight London new towns could make to the metropolis overspill problem if a nationalizing of housing subsidies meant lowering them and leading to less demand for houses from these low rent localities. Only the prospect of closer proximity of the home to the work-place and civilized surroundings would then remain as a counter attraction.

Much had been done to encourage

industry but their scope for a diversity of kinds was limited because the provision of small factory accommodation in advance of actual requirements was still prohibited, whereas the speculative builder could do so if each structure was less than 5,000 sq ft. Hemel Hempstead was seeking power to build standard factories even though it had achieved correlation of housing and employment.

While most such rented factories had been built by the Corporations, private investment in Crawley had achieved a £3 million investment by March, 1954. The September reports showed that over 2.8 million sq ft of factory accommodation had been provided in the eight London new towns and that a further 2.5 million sq ft was being built which would provide for a further 10,000 people.

In fact, they had shown a pattern of industrial selection schemes applicable to the Town Development Act policies and had saved London's Green Belt from pressure to build by inducing a flow of population to planned locations. Unfortunately, the Board of Trade hadn't yet appreciated to the full the need to correlate industrial location to the national policy for the development of towns. Miss J. Adburgham later supported this contention in quoting a case at a Compulsory Purchase Order Inquiry concerning 45 acres only 4 miles from Basildon new town. An objector had stated preference for a site in the new town but had been refused an industrial development certificate from the Board of Trade and was therefore unable to withdraw his objection to the C.P.O. She suggested that this conflict between town planning industrial location and Board of Trade aims ought to be resolved by the Cabinet.

They were succeeding in demonstrating the need to measure the rentability of the industrialists' own capital with the advantages accruing from planned investment of new social capital—that is from synchronizing home building and amenities within the new towns with phased factory construction from which both benefited.

It was incredible to learn in this second half of the 20th century of the carping policy and expediency permanently determining the social environment to its grave detriment by the inadequate provision of recreation spaces. As Mr. Williams pointed out, the Corporation's virtue as a prudent developer can be diminished by its restricted power as a provider of social amenity and the 1954 reports showed dangers of an increasing population outstripping their provision. For example, since 1949, the Ministry of Education had not been able to release

capital to education authorities for playing fields and community centres, and, he might have added, that authority has been forced to reduce playing field standards for the sake of expediency and so cause layout plans to be altered to give permanent effect to present-day expediency. This is indeed "putting the clock back."

The general picture portrayed was one of lively progress under difficult financial and administrative conditions and of a state of social unbalance due to political and financial expediency of the times. That policy based upon the expediency of the moment should have been allowed to dictate the permanent environment is dreadful to hear when one thinks of all the teachings of forward thinking of these post-war years.

But what of the final paper on the "Expanding of Country Towns," by Mr. Reginald Stamp, Chairman of the L.C.C. Housing Committee? One of the exciting facts is the confirmation it gives that such a great public body with large financial resources as the L.C.C. has been won over to the conception of the New Town and Expanded Town conception as opposed to the polemics of local government insularity. It is six years since the Minister of Health requested the L.C.C. to stop building in the Green Belt and to pursue the "Expanded Towns" policy of the Greater London Plan, and although the L.C.C. had long before embraced the broad principles of planning, it had required a terrific wrench to break from the traditional process of expanding London and to put its convictions into practice instead.

The paper was, therefore, a reiteration of aims and an explanation of real endeavour to achieve the co-operation of various country towns: to obtain a planned physical exodus of both industry and population and their reinstatement in towns within two hours' journey of London, where farms and old-established industries have been deprived of labour by migration to the cities, where a greater diversity of occupation is desirable and where the local economic resources need improvement to support up-to-date social services.

The process followed was a preliminary industrial selection scheme registering families, with their authority, who were willing to transfer to New and "Expanded" towns. The authority then submitted the lists to the Ministry of Labour for employers to draw on as required; 10,253 such families had been nominated to these towns, of which 956 had been placed in employment and 511 accommodated. A survey of the very urgent category of

[Continued on page 767]

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families on the housing list showed that 28,000 were willing to leave London, and probably more.

Again the Board of Trade was criticized for its policy as one which was in conflict with these aims of town planning. Between 1948 and 1952 more industrial development certificates had been granted in two "contraction areas" (Greater London and Birmingham) than in the Development Areas.

Replanning London would, therefore, practically cease unless industry and population went out of London, and housing in London would stop within three years unless development outside the City could release sites inside it. This was an extremely serious warning given by the Chairman of the Housing Committee and was one that has been made in this Journal more than once before, though this is perhaps the first time it has been publicly acknowledged by an authority.

This situation had arisen entirely from the housing list policy being unrelated to central area redevelopment of the outmoded and congested localities sufficient to permit demolition while the bombed sites were rebuilt and new towns developed. The result was an inevitable shortage of building sites. The solution required a change

of political housing policy which no Government had been prepared to risk and the setting up of a central administering body which the L.C.C. had not been prepared to acknowledge as an overriding authority. Instead of the latter, the L.C.C. has nobly sought its own way out by separately negotiating with country towns under the Town Development Act.

In so doing many impediments to progress had been experienced: the absence of confirmation by the Government of schemes submitted, especially the lack of co-operation by the Board of Trade; the reluctance of local authorities to submit schemes until the measure of Government grant was known and the scope of developments the Government would approve; the hesitancy of the receiving authorities to face now the financial position at the end of ten years when the rate subsidy from the overspill authority ceased and they assumed responsibility of the loan charges; and local opposition based apparently mainly upon ignorance of the facts or for purely personal reasons.

Mr. Ling, L.C.C. Planning Officer, stressed the need to limit the amount of office accommodation in the City to a rearrangement of existing occupiers because of the very urgent and serious

situation arising from mammoth office buildings reversing the accepted overspill policy for Greater London and enforcing the expensive costs of building flats, referred to by Mr. Stamp, on expensive land in big towns. For example, 40,000 workers would be attracted to the Fore Street area of the city alone by the construction of six million sq ft of floor space.

The story the conference had to tell was the ever-growing grave problems arising from the need for really effective legislation which closes the loopholes in the present 1947 Act, such as the reoccupation of vacated premises which Birmingham recently failed to do by a private act. The excessive creation of new office accommodation in the big towns and a definite linkage between central areas of the big cities scheduled for redevelopment and the new and "expanded" towns in taking overspill sufficient to permit demolition in those central areas are essential problems for central administration. Without a solution to these and many other problems mentioned, planning will fail, to the detriment of the whole nation.

DEREK PLUMSTEAD,
A.R.I.B.A., A.M.T.P.I.

CAPITAL EXPENDITURE OF THE NEW TOWN CORPORATIONS.

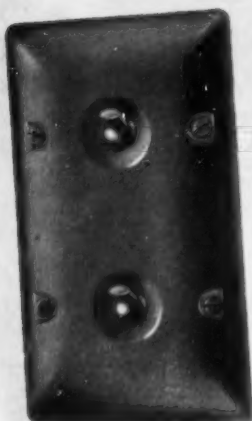
Development Corporation and date of incorporation		CAPITAL EXPENDITURE FROM DATE OF INCORPORATION TO 31st MARCH, 1954							No. of dwellings built by Corporation	
		Total Capital Expenditure for the year ended 31st March, 1954	Land Acquisition and site works including main sewerage and main roads	Construction of houses and flats	Construction of factories	Water undertaking	Other capital expenditure including purchase of buildings	Total capital expenditure		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		
		£'000	£'000	£'000	£'000	£'000	£'000	£'000	during 1953/1954	total to 31.3.54
Aycliffe	July 1947	1,005	687	2,607	—	—	267	3,561	569	1,444
Basildon	February 1949	2,396	1,575	2,377	1,073	—	380	5,355	693	1,233
Bracknell	October 1949	1,424	735	1,273	128	—	261	2,397	225	429
Corby	May 1949	831	419	992	39	—	261	1,711	391	571
Crawley	February 1947	4,294	3,040	6,268	778	235	1,067	11,388	1,228	2,871
Cwmbran	November 1949	1,204	655	1,326	—	—	255	2,236	262	566
East Kilbride	August 1947	2,753	1,162	4,457	—	—	453	6,072	1,007	1,808
Glenrothes	October 1948	870	409	1,552	—	—	211	2,172	410	746
Harlow	May 1947	5,400	3,832	7,691	880	372	867	13,642	1,687	3,774
Hemel Hempstead	March 1947	3,665	3,287	6,185	1,498	—	1,404	12,374	1,146	3,236
Peterlee	March 1948	1,073	834	2,328	—	—	312	3,474	603	1,412
Stevenage	December 1946	3,514	3,686	4,373	513	416	825	9,813	852	2,018
Welwyn G. City	June 1948	1,334	1,694	2,196	142	—	2,030	6,062	465	1,010
Hatfield	June 1948	765	336	1,560	7	—	171	2,074	364	781
		30,529	22,351	45,185	5,008	1,023	8,764	82,331	9,912	21,899

NEW TOWNS: SUMMARY OF PROGRESS UP TO 30th SEPTEMBER, 1954.

	DWELLINGS			FACTORIES					LABOUR* Engaged on Construction		
	Completed	Under construction	Completed			Under Construction			Building	Civil Engineering	Total
			No. of Occupying Firms	Area sq. ft.	Persons Employed	No. of Occupying Firms	Area Sq. ft.	Persons to be employed			
LONDON NEW TOWNS											
Basildon	1,568	975	11	423,130	2,464	7	87,785	668	940	428	1,368
Bracknell	712	681	5	216,634	820	6	78,045	352	641	197	838
Crawley	3,872	1,360	30	778,900	3,629	13	752,926 (a)	2,318	1,983	670	2,653
Harlow	4,762	1,663	34	443,719	2,383	23	733,230	3,091	2,090	680	2,779
Hatfield	967	263	—	—	—	8	51,560	213	354	44	398
Hemel Hempstead	3,805	1,028	15	704,947	4,467	7	99,800	404	1,052	198	1,250
Stevenage	2,694	2,102	9	215,500	1,121	7	483,570 (b)	2,346	1,660	206	1,866
Welwyn	1,370	960	4	25,528	118	3	174,300	561 (c)	742	85	827
Total—London New Towns ...	19,750	9,032	108	2,808,358	15,002	74	2,461,216	9,953	9,470	2,509	11,979
PROVINCIAL NEW TOWNS											
Aycliffe	1,665	497	(d)	(e)	(e)	(e)	(e)	(e)	489	147	636
Corby	704	516	4	21,310	274	1	10,480	35	394	142	536
Cwmbran	917	817	(e)	(f)	(f)	1	18,700	73	672	224	896
Peterlee	1,357	438	1	70,000	335	1	50,000	700	481	138	619
Total—Provinces	4,843	2,268	5	91,310	609	3	79,180	808	2,036	651	2,687
GRAND TOTAL	24,593	11,300	113	2,899,668	15,611	77	2,540,396	10,761	11,506	3,160	14,666

* Excludes gas, electricity and G.P.O. projects, schools, local authority housing and private enterprise projects not sponsored by the Development Corporation.

(a) Includes extensions amounting to 263,538 sq ft. (b) Includes a building of 49,700 sq ft to be used by the Department of Scientific and Industrial Research and two extensions amounting to 93,500 sq ft. (c) Includes an extension of 37,300 sq ft to a factory under construction. (d) Industry already exists in the Trading Estate. (e) Industry exists in the Trading Estate and extensions to existing factories have taken and are taking place. These are not shown in the table.



MOSAICS

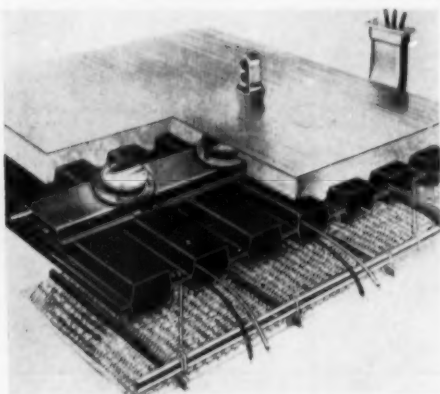
SERVICES ELECTRICAL ACCESSORIES B5/46

The General Electric Co. Ltd., Magnet House, Kingsway, W.C.2, has produced a new range of "Mutac" 5 amp. A.C. flush switches, which are available in either cream or brown and arranged in one-gang and two-gang assemblies for mounting on a new range of pressed steel plaster depth boxes. The one-gang assembly consists of a one-way or two-way switch riveted to a Bakelite plate measuring 3½in square. The two-gang unit has two switches, either one-way, two-way or a combination of these riveted to a 5½in x 3½in plate. The plates are specially shaped to absorb part of the depth of the switches, and this makes them suitable for fitting to ½in deep plaster depth boxes. The fixing holes in the plaster, two holes for one-gang and four for two-gang, are at 2½in centres for direct fixing to plaster depth boxes or to the deeper patterns such as those to the dimensions given in B.S.1299 and B.S.1363. Captive 4 B.A. fixing screws, bronze colour for brown units and chromium-plated for cream units, are provided to allow adjustment for varying thicknesses of plaster. The two-gang switch assemblies are for vertical mounting only.



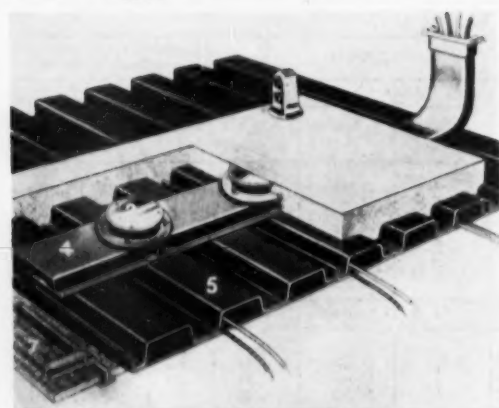
FINISHES MISCELLANEOUS D9/1

This display lettering, in cork with an adhesive backing, is made in a variety of founts and sizes. A new catalogue illustrating the letters and other equipment has recently been produced. It was designed by W. M. de Majo, M.B.E., M.S.I.A., and it is printed by L. Deloche & Co. Ltd. Known as Graforel lettering, they are made by London Industrial Art Ltd. of 3, All Saints Road, London, W.11.



STRUCTURE FLOORING A10/9

Robertson Q-Floor, by Robertson Thain Ltd., Ellesmere Port, Cheshire, consists principally of a metal decking which, with an infilling of concrete, acts as permanent shuttering, reinforcement, and electrical ducting. The steel panels, which are two feet wide, are made in five different sections to cater for varying load requirements. The lengths are supplied to order. The top illustration shows a double section for large span-load requirements, underneath is a lighter single channel section. The numbers on this illustration show:— 2 an electrical function box, 4 an electrical leader duct, 5 the Robertson Q-Floor, and 7 a typical suspended ceiling. The many advantages include speed of erection and great adaptability for the provision of electrical outlets. It is extremely simple and quick to tap wires at almost any desired point on the floor surface to provide a new electrical outlet point by fixing an electrical outlet unit.



INDUSTRIAL NOTES

- Mr. Claud Edgar Wallis, M.B.E., Chairman and Managing Director of Associated Iliffe Press, has been elected Chairman of Kelly's Directories.
- Last year it was decided to market Osram 40 W and 60 W G.L.S. lamps in the same bulb size. As a further stage in the simplification of the range, 75-watt and 100-watt single coil and coiled coil lamps will be supplied in a 68mm dia. bulb for all three types (Clear, Pearl and Silverlight).
- Sunrod, Ltd., have now started production at their new factory at Cray Avenue, St. Mary Cray, Kent. Enquiries for all forms of heat exchangers will continue to be dealt with at their London Office (1 and 2, Hen and Chickens Court, 184 Fleet St., London, E.C.4).
- The Daily Mail Ideal Home Exhibition of 1955 will be held at Olympia from March 1 to March 26.
- The second post-war convention of the Coal Utilisation Council is to be held at Eastbourne on April 18 and 19, 1955, the Council announced recently.
- To give greater service to customers in Nottingham and District, Mr. J. N. Griffiths, who has previously handled the Electrical Plant and Apparatus business from B.T.H. Sheffield Office, is now located in the B.T.H. Nottingham premises, 71-73, Lower Parliament Street. (Telephone: Nottingham 43588.)
- For 1953 and earlier years Savings Certificates, etc., given by employers to employees as Christmas presents in lieu of customary gifts in kind were, under an extra-statutory concession, not charged to Income Tax. It was announced by the Chancellor of the Exchequer on December 15, 1953, in reply to a Parliamentary Question, that the concession will not be continued for 1954 and subsequent years, the special conditions which justified it during the war and in post-war years having largely ceased to exist.
- Messrs. Gent & Co., Ltd., Faraday Works, Leicester, the electrical and horological engineers, announce the appointment of Messrs. Henry Tatton & Son, Ltd., 24-30, Rose Street (East), Hanover Street, Edinburgh, 2, as their agents for their controlled electric clock systems, time recorders, programme instruments, etc. In addition to their Edinburgh premises, Messrs. Henry Tatton & Son, Ltd., have taken over the premises at 20, Blythswood Street, Glasgow, C.2, recently occupied by the late Mr. W. B. Martin who was the agent for Messrs. Gent & Co., Ltd., in Scotland for this class of equipment.
- Glovers Advertising Agency has moved to 351, Oxford Street, W.1, opposite Marshall & Snelgrove, Ltd. The telephone number is Hyde Park 9757. The Bristol address is unchanged.
- Messrs. Dorman & Smith, Ltd., and D. S. Plugs, Ltd., have moved their London offices from 10, Emerald Street, W.C.1, to 125, High Holborn, W.C.1.
- J. Burley & Sons, Ltd., have moved to Burley's Corner, Brooklands Road, Weybridge, Surrey. Telephone and telegrams: Byfleet 2771 (6 lines).
- Mr. Charles Argent has been elected Chairman of the Natural Asphalte Mine-Owners and Manufacturers Council consequent upon the sudden death of Mr. F. Malcolm Bond. Mr. Argent is the Managing Director of Val de Travers Asphalte, Ltd.

ELECTRIC LIGHTING

LAMPS AND LIGHT FITTINGS

Light fittings have two major functions: to distribute as much as possible of the light emitted from the lamp in the required directions and intensities, and to reduce the brightness of the lamps to a comfortable level at which all risk of glare or discomfort is eliminated. Their appearance is generally subordinated to these requirements where efficiency is of primary importance.

Filament Lamps

The type of lamp most widely used is known as the General Lighting Service Lamp (G.L.S.); the normal finishes for the bulbs being clear glass, internally frosted ('pearl') and internally silica coated. As there is no appreciable loss of light through pearl or silica-coated glass, clear glass bulbs should not be used unless hard shadows or glitter are required, as in some forms of display illumination. Silica-coated bulbs have a lighted appearance almost identical with the old 'opal' lamps, but their efficiency is considerably higher and they cast softer shadows. They are therefore recommended for open fittings in general and domestic lighting in particular, being obtainable in the following wattages: 40, 60, 75, 100, 150 and 200 watts. The average life of a filament lamp may be taken as 1,000 hours, throughout which period it operates with a standard light output.

Fluorescent Lamps

Fluorescent lamps are basically mercury vapour discharge lamps operating at a very low vapour pressure and generating ultra-violet radiation which is absorbed by the fluorescent powder lining the tube and re-emitted as visible light. Two types are in use—the familiar mains voltage (Hot Cathode) type, and the high voltage (Cold Cathode) type with longer tubes. Only the mains voltage type of fluorescent lamp is considered in these notes. These lamps give at least three times as much light as filament lamps of the same wattage, and operate at low surface temperatures with the emission of relatively little radiant heat: their life is approximately five times that of a filament lamp, the standard rating being 5,000 hours. They have a much lower surface brightness, and their light is evenly distributed.

Their overall efficiency and economy will often be found to outweigh the disadvantages of higher first cost (due to the need for control gear and larger light fittings). Fluorescent lamps of different wattages are not interchangeable in the light fittings as are filament lamps; their colour-rendering properties are more critical than, though not necessarily inferior to, filament lamps. Hot Cathode lamps are obtainable in the following sizes and wattages: 15 watt, 1 ft. 6 in. long; 20 watt, 2 ft. long; 40 watt, 2 ft. long and circular 16 in. diam.; 30 watt, 3 ft. long; 40 watt, 4 ft. long; 80 watt, 5 ft. long.

Fluorescent Lamps with Filament Ballast

Fluorescent lamps may be used with a resistance instead of an inductive choke, a filament lamp of suitable characteristics being satisfactory for this purpose. This type of control is known as filament or tungsten ballast, and fittings incorporating both fluorescent and filament lamps are available. Against the advantages of saving in cost and weight of the complete fitting, instant starting and elimination of choke hum, must be set the lower efficiency of the combination (approximately 20 lumens per watt as compared with 30-35 lumens per watt with chokes as ballast).

Maintenance and Service

Immediately a lighting installation is put into service its performance begins to deteriorate and allowance must be made for this from the start. Fittings should be used which do not provide unnecessary lodgements for dirt, which can easily be cleaned without damage, and which permit of easy lamp changing.

When designing an installation, a "maintenance factor", $\frac{E_d}{E_i}$, is applied, where E_d is the illumination after depreciation, and E_i is the designed initial illumination. With ordinary atmospheric conditions it is usual to allow a maintenance factor of 0.8, which is based on the assumption that lamps and fittings will be cleaned regularly: in very dirty industrial interiors it may be as low as 0.5. The latter figure may also apply to indirect fittings and features unless particular attention is paid to cleaning.

Performance of Lighting Fittings

Table 1 gives particulars of the performance of a range of typical light fittings, the wattage values given including corrections for room dimensions and average reflection factors of 70% for ceiling and 40% for the walls (see L.1). It is important to realise that these wattages are required to give the same illumination in each case, *not* the same appearance of lighting: they should be increased when the room is small or the window area large and unscreened by light blinds or curtains. The table will give a fair basis for preliminary estimates with different types of lighting: closer figures will be prepared by the lighting engineer using the standard tables of data.

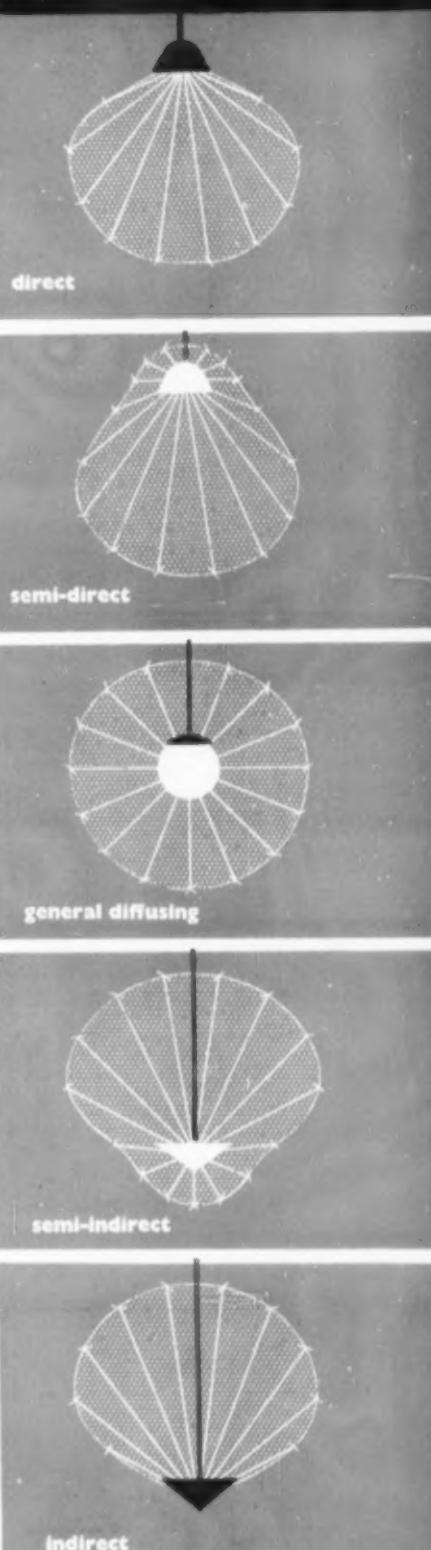


Fig. 1. Light distribution

L.2

24 (ADVERTISEMENT)
TABLE 1 LIGHTING FITTINGS
TYPES AND PERFORMANCE

direct

Dispersive Reflector



Deep Bowl Reflector



Diffusing Reflector



Trough Reflector



semi-direct

Translucent or open top shades



Enclosed



Batten or V-channel



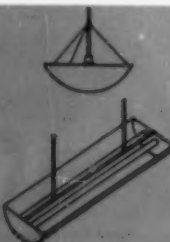
general diffusing

Enclosed
Flashed opal glass



semi-indirect

Translucent
Inverted bowls



indirect

Cornices, coffers and other similar "architectural" treatments



Lamps used	Approx. lamp wattages per 100 sq ft of room area to give 1 lm/sq ft in service			Remarks
	A*	B*	C*	
Filament	26	20	17	Spacing-height ratio 1.5:1 (max.). Normal shielding angle 20°. No provision for diffusion. Tend to give hard shadows and produce bright highlights on polished surfaces. Easily cleaned.
Mercury Discharge	11	9	8	
Filament	29	23	19	
Filament	31	23	19	Gives small amount of upward light. Diffuser round lamp reduces shadows and softens highlights.
Fluorescent	8	6.5	5.5	Open top or translucent reflectors are made and recommended for most purposes. Can be used in continuous lines or with closed tops tight against ceiling.
Filament	32	23	21	Shades should have white interiors.
Filament	34	24	20	Should be sealed against dust, otherwise difficult to keep clean.
Fluorescent	9	7.25	5.5	Satisfactory only with light coloured decoration. Can be glaring at low mounting heights, and lose efficiency as mounting height increases.
Filament	35	25	20	Not dust-tight unless properly sealed. Better for small than large interiors. Danger of glare when used in large numbers. Tend to cause distraction.
Filament	40	30	25	These types of fitting need frequent cleaning. Careful adjustment of position of lamp and mounting height necessary to avoid noticeable shadow line on walls. For use where efficiency is a secondary consideration.
Fluorescent	13	10	8	
Filament	53	33	27	Fittings must be easily accessible as both lamps and fittings need frequent cleaning. Careful adjustment of mounting height necessary to avoid shadow lines and dark areas on ceiling and walls.
Filament	95	56	48	Careful design necessary to release the maximum light: no more shielding should be provided than is essential to avoid direct view of lamps. All corners should be gently rounded. In particular, lamps need very frequent cleaning.
Fluorescent	32	19	16	

NOTES *A = Room having width equal to height.

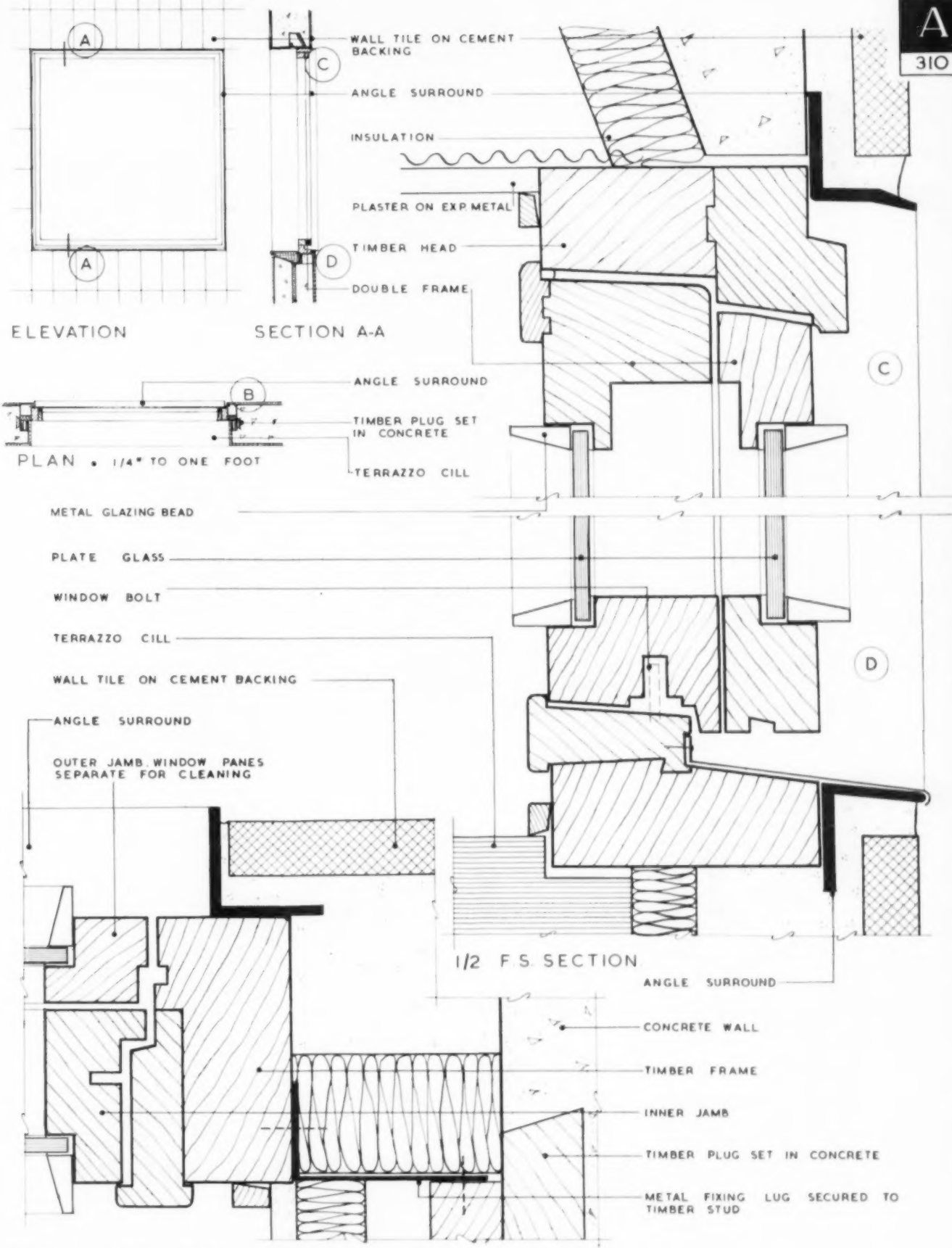
*B = Room having width equal to twice the height.

*C = Room having width equal to four times the height.

The wattages given for fluorescent lamps are based on "Natural" shade lamps.

L.2 British Electrical Development Association

For further details apply to the British Electrical Development Association,
2 Savoy Hill, London, W.C.2. Temple Bar 9434



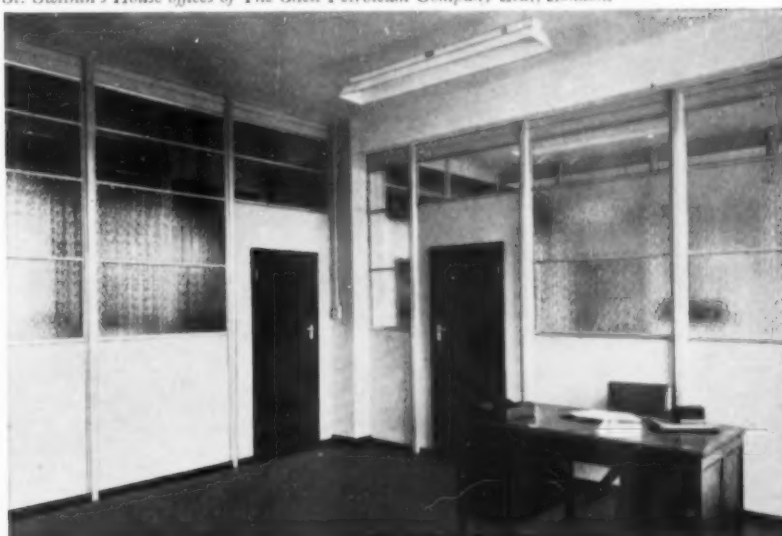
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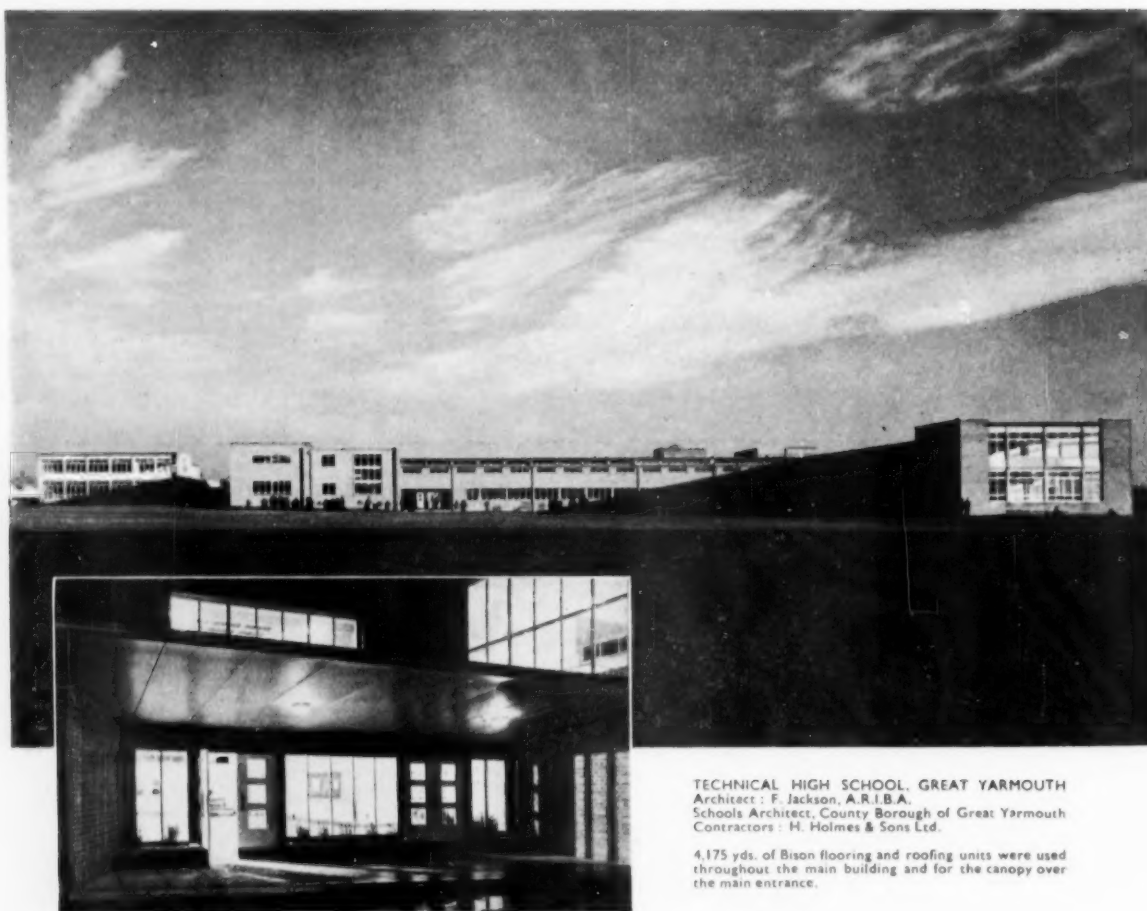
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LICHFIELD Dovehouse Fields, Lichfield, Staffs. Lichfield 2404

FALKIRK Etna Road, Falkirk, Falkirk 1585

EDINBURGH Sighthill Industrial Estate, Edinburgh. Craiglockhart 1729

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

CONTRACT • NEWS •

OPEN

BUILDING

BIGGLESWADE U.C. (a) 43 houses, The Dells. (b) Engineer and Surveyor, Stratton House. (c) Dec. 29.

BLACKBURN B.C. (a) Erection of mixed secondary modern school for 510 pupils, Witton Park. (b) Borough Engineer, Town Hall. (c) 2gns. (d) Dec. 30.

BRIGHTON B.C. (a) Adaptations to Varndean Secondary School. (b) Engineer and Surveyor, 26-30, Kings Road. (c) 2gns. (e) Jan. 3.

CAMELFORD R.C. (a) Erection of (1) block of 6 houses, Tintagel; (2) 2 pairs of houses, Camelford; (3) pair of houses, Lesnewth. (b) Council's Surveyor, Council Offices. (c) 1gn. (e) Dec. 29. (Tenders for all or any of the above.)

EAST RIDING C.C. (a) Alterations and extensions to Bridlington St. George's Secondary School and the Kirk Ella C.E. School. (b) County Architect, County Hall, Beverley. (c) £2. (e) Jan. 3.

ESSEX C.C. (a) Erection of Canvey Island secondary school; approx. cost £100,000. (b) County Architect, County Hall, Chelmsford. (d) Jan. 1.

ESSEX C.C. (a) Improvements to sanitary accommodation at (1) Stebbing Primary School (approx. cost £5,100); (2) Coggeshall Primary School (approx. cost £2,000); (3) Buckhurst Hill Primary School (approx. cost £2,500); Adaptations to form dining hall at Laindon/St. Nicholas Lane primary school (approx. cost £2,500). (b) County Architect, County Hall, Chelmsford. (d) Jan. 1.

ESSEX C.C. (a) Erection of 2 classrooms at Ardleigh House further education centre, Hornchurch (approx. cost £2,900). (b) County Architect, County Hall, Chelmsford. (d) Jan. 1.

ESSEX C.C. (a) (1) erection of 2 additional classrooms, etc., Doddinghurst C. of E. Primary School, approx. cost £7,000; (2) 3 additional classrooms, etc., Great Burstead Primary School, approx. cost £7,500; (3) 2 additional classrooms, etc., Langdon Hills Primary School, approx. cost £4,000; (4) 2 additional classrooms, etc., Horndon-on-the-Hill C. of E. Primary School, approx. cost £4,000. (b) County Architect, County Hall, Chelmsford. (d) Dec. 24.

ESSEX C.C. (a) Adaptation of Grosvenor House, Westcliff-on-Sea, to form hostel for elderly persons, approx. cost £6,000. (b) County Architect, County Hall, Chelmsford. (d) Dec. 18.

ESSEX C.C. (a) New branch library, Waltham Abbey, approx. cost £4,300. (b) County Architect, County Hall, Chelmsford. (d) Dec. 18.

address it is the same as the locality given in the heading. (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

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HAVANT AND WATERLOO U.C. (a) 7 garages, New Barn Road, Bedhampton. (b) Engineer and Surveyor, Park Road North, Havant. (c) 1gn. (e) Dec. 24.

HAVANT AND WATERLOO U.C. (a) 28 houses, Scratchface Lane estate, Bedhampton. (b) Engineer and Surveyor, Council Offices, Park Road North, Havant. (c) 3gns. (e) Dec. 24.

LIVERPOOL REGIONAL HOSPITAL BOARD. (a) Conversion of existing wards at Clatterbridge Hospital, Bebington. (b) Regional Architect, 88, Church Street, Liverpool, 1. (c) 2gns. (e) Jan. 5.

LLANFYLLIN B.C. (a) (1) erection of 2 blocks of 6 houses and 1 block of 4 bungalows at Bronygaer, with (2) construction of roads, sewers and water mains. Tenders for (1) and/or (2). (b) W. B. Bond, Windsor House, 49, Calthorpe Road, Edgbaston, Birmingham, 15. (c) 2gns. (d) Dec. 31.

LONDON—TOTTENHAM B.C. (a) 4 bungalows, 2 houses, Bisley Estate, off Park Lane, Cheshunt. (b) Borough Engineer, Town Hall, N.15. (c) 1gn. (d) Dec. 22.

LOWESTOFT B.C. (a) 26 flats in 18 blocks, Beeches Estate, Normanston Drive. (b) Borough Engineer, 49, High Street. (c) £2. (e) Dec. 23.

NORFOLK E.C. (a) Erection of clinics at Wells Secondary Modern School and Hellesdon Infants' School. (b) Chief Education Officer, County Education Officer, Stracey Road, Norwich. (d) Dec. 22.

N. IRELAND—LONDONDERRY E.C. (a) Construction of girls' intermediate school, Coleraine. (b) C. G. Dalzell, Northern Bank Building, The Diamond, Coleraine. (c) £5. (e) Jan. 12.

NORTH KESTIVEN R.C. (a) Construction of (1) five pairs of O.P.D.s and 1 pair Type C.2 at Wasingborough; (2) four pairs O.P.D.s at Metheringham; and (3) six pairs of O.P.D.s at North Hykeham. (b) Council's Surveyor, Flaxengate, Lincoln. (c) 2gns. (e) Dec. 29.

NORTHUMBERLAND C.C. (a) Fire station at Bellingham. (b) County Architect, County Hall, Newcastle-upon-Tyne, 1. (c) 2gns. (d) Dec. 22.

NORTHUMBERLAND C.C. (a) 3 pairs of police houses and a section station on 2 sites at Cowpen, near Blyth. (b) County Architect, County Hall, Newcastle-upon-Tyne, 1. (c) 2gns. (d) Dec. 22.

OLDBURY B.C. (a) 175 houses, Cake-more Estate. (b) Borough Surveyor, Municipal Bank Chambers, Birmingham Street. (c) 3gns. (d) Dec. 21. (e) Jan. 28.

PETWORTH R.C. (a) 18 accommodation units, Houghton Lane estate, Bury. (b) Messrs. Godman and Kay, Milnwood, 13, North Parade, Horsham. (c) Jan. 11.

PLYMOUTH C.C. (a) Erection of (1) Stoke Military Hospital—Block "A" and extensions, (2) Pembroke Street primary school, (3) Charlotte Street primary school. (b) City Architect, Seymour Road. (c) 3gns each contract. (d) Dec. 18.

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PORTSMOUTH C.C. (a) 100 houses, Bedhampton Camp. (b) City Architect, 1, Western Parade. (c) £1. (d) Dec. 29.

SCOTLAND—ANGUS C.C. (a) Erection of police offices and houses at (1) Carmyllie and (2) Inverkeilor. Separate trades. (b) County Architect, County Buildings, Forfar. (e) Dec. 23.

SCOTLAND—ARGYLL. (a) Rebuilding of 2 houses (fire-damaged) at Glenachulish, Argyll, for Scottish Special Housing Association, Ltd. (b) Scottish Special Housing Association, Ltd., 15-21, Palmerston Place, Edinburgh, 12.

SHREWSBURY B.C. (a) Erection of old persons' bungalows at Springfield (5), Meole Brace (8), and Meadows Estate (2), forming one contract. (b) Borough Surveyor, Guildhall. (e) Dec. 31.

SOMERSET C.C. (a) Erection of Bridgwater day special school. (b) County Architect, Park Street, Taunton. (c) 2gns. (d) Dec. 20.

STOCKPORT T.C. (a) 36 houses and flats and a children's home (Contract 35) and 68 houses and flats (Contract 36), Brinnington Estate. (b) Borough Surveyor, Town Hall. (c) 3gns. (d) Dec. 18. (e) Jan. 15.

TAVISTOCK R.C. (a) 21 dwellings, Fillace Park, Horrabridge. (b) Messrs. Rossington and Fogden, Drake Road. (c) 3gns. (e) Dec. 23.

WESTON-SUPER-MARE B.C. (a) 40 houses, Coronation Estate. (b) Town Clerk, Town Hall. (d) Dec. 20.

WEST RIDING C.C. (a) Conversion of Water Street Chapel, Skipton, into offices. (b) County Architect, "Bishopgate," Westfield Road, Wakefield. (e) Jan. 3.

WEST SUSSEX C.C. (a) Alterations, additions and improvements, including erection of a gym block, Midhurst Grammar School. (b) County Architect, County Hall, Chichester. (d) Dec. 24.

WILTSHIRE C.C. (a) Pair of police houses, Ludgershall. (b) Clerk of the County Council, County Hall, Trowbridge. (c) 2gns. (d) Dec. 22. (e) Jan. 18.

WILTSHIRE C.C. (a) Erection of first instalment of special agreement school, Amesbury. (b) Clerk of the County Council, County Hall, Trowbridge. (c) 2gns. (d) Dec. 21. (e) Jan. 26.

WREXHAM B.C. (a) (1) erection of 48 dwellings at Ashton Grove; (2) 96 dwellings at Rhosnessney; (3) 8 houses, Fenwick Drive, Rhosnessney. (b) Borough Engineer, 31, Chester Street. (c) 3gns each contract. (e) Jan. 7.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, for obtaining of licence, or modification of tenders, etc.

DEPTFORD B.C. (1) Dwellings. (2) Clyde Street and Shardloes Road. (3) Rowley Bros., Ltd., Dunloe Avenue, Tottenham, N.17. (4) £95,088 and £95,794.

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WANDSWORTH B.C. (1) Two 8-storey blocks of flats. (2) Southmead. (3) E. H. Smith (Croydon), Ltd., 48, Wellesley Road, Croydon, Surrey. (4) £138,830.

LIVERPOOL CORPORATION. (1) Completion of offices. (2) Hatton Garden. (3) Peak Construction Co., Ltd., 49, Hamilton Square, Birkenhead. (4) £127,795. (1) 79 dwellings. (2) Tamworth Street. (3) Direct labour. (4) £130,000. (1) 21 flats. (2) Southwell Street. (3) R. J. Barton and Sons, Ltd., Altcar Road, Formby. (4) £39,037.

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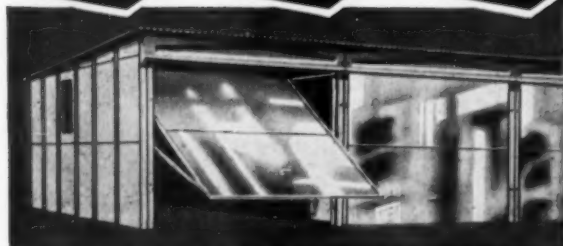
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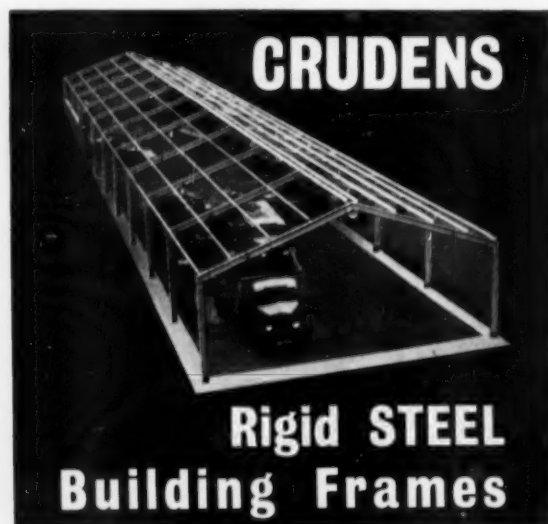
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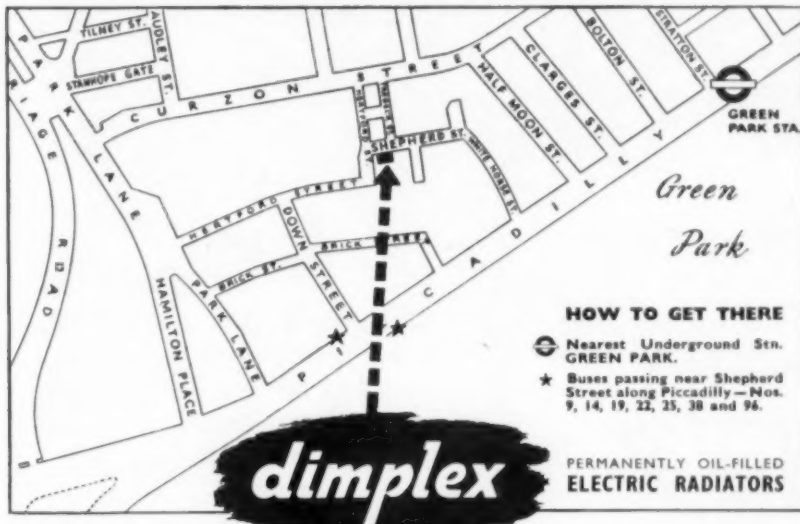
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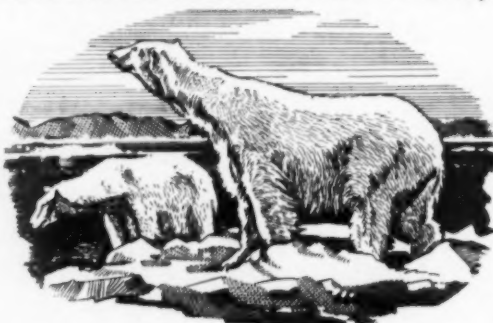
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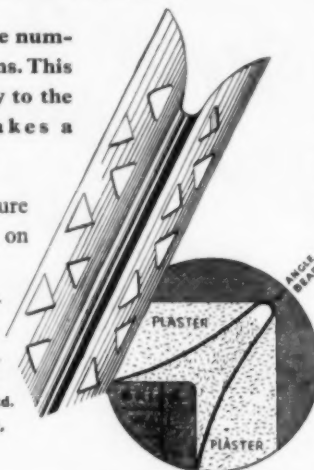
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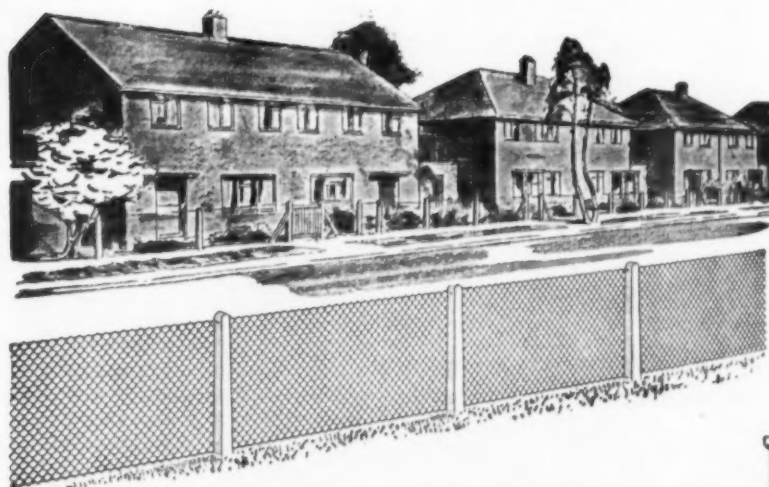
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PRESS NOTICE

DECEMBER 23rd issue closing for press 10 A.M.
FRIDAY DECEMBER 17th.
DECEMBER 30th issue, 10 A.M. WEDNESDAY
DECEMBER 22nd.

APPOINTMENTS

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is exempted from the provisions of The Notification of Vacancies Order, 1952.

MINISTRY OF WORKS.

ARCHITECTURAL ASSISTANTS required for drawing offices in London, Edinburgh and various provincial offices, including Aldermaston, Berks; Harwell, Oxon; Nancekuke, Cornwall; Ranskill, Notts; and Bishopston, Renfrew.

Candidates must have had at least three years' architectural training, some experience in an architect's office, and be of Intermediate R.I.B.A. standard.

London salary £442-£695 per annum. Rates elsewhere slightly less. Starting pay according to age and experience. Prospects of promotion and establishment.

State age, full details of training and experience and office desired, to E. Bedford, Esq., C.V.O., A.R.I.B.A., Chief Architect, Ministry of Works, W.G.10/C.A.10(G), Abell House, John Islip Street, London, S.W.1. [8537]

KINGSWOOD U.D.C. (BRISTOL)**SURVEYOR OF THE COUNCIL**

APPLICATIONS for this vacancy by Monday, 20th December, must set out detailed experience under each section of local government work; posts held with dates, age, two testimonials, qualifications, etc. (Corporate Members of the Institution of Civil Engineers and/or hold the testimonial of the Institution of Municipal Engineers. Architectural qualifications and experience would be an additional recommendation). The duties must be taken up not later than the 31st March, 1955.

Salary £920 with three increments of £57 10s to £1,092 10s. (New National Scales and conditions and all future recommendations implemented automatically.) As Kingswood (19,000 population approx.) is on the Gloucestershire fringe of Bristol City, it is being rapidly developed and it needs a Surveyor of vision, initiative and experience.

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I. H. DEARNLEY,
Clerk of the Council.

Council Offices,
Kingswood, Bristol. [8615]

BOROUGH OF STRETFORD.

ARCHITECTURAL Assistant required. Grade A.P.T. III (£600-£725). One month's notice. N.J.C. Conditions. Medical Examination. Qualifications: Inter.R.I.B.A. or equivalent. Experience in the design and construction of all types of municipal buildings, e.g., housing schemes, blocks of flats, baths, etc., and the ability to deal with the preparation of specifications and quantities, setting out, measuring up and settling accounts will be an advantage. Application forms from Borough Engineer, Town Hall, Stretford. Returnable by December 29th, 1954.

C. TREWAVAS,
Town Clerk. [8624]

LONDON COUNTY COUNCIL.**ARCHITECT'S DEPARTMENT.**

VACANCIES for ARCHITECTS, Grade III (up to £892 10s), and **ARCHITECTURAL ASSISTANTS** (up to £739 10s) in Schools and Housing Divisions.

Particulars and application forms from Architect (AR/BK/A/3), County Hall, S.E.1. (1058.) [0146]

APPOINTMENTS—contd.**MINISTRY OF WORKS.**

LEADING ARCHITECTURAL ASSISTANTS required for drawing offices in the Chief Architect's Division in London, Edinburgh and various provincial offices.

Candidates must have had at least three years' architectural training, good experience in an architect's office, and be of Intermediate R.I.B.A. standard. London salary £710 to £834 per annum. Rates elsewhere slightly less. Starting pay according to experience. Prospects of promotion and establishment.

State age, full details of training and experience and office desired, to E. Bedford, Esq., C.V.O., A.R.I.B.A., Chief Architect, Ministry of Works, W.G.10/C.A.10(G), Abell House, John Islip Street, London, S.W.1. [8525]

MINISTRY OF WORKS.

ARCHITECTURAL ASSISTANTS required for drawing office of the Ancient Monuments Branch in London.

Candidates must have had at least three years' architectural training, some experience in an architect's office, and be of Intermediate R.I.B.A. standard. They must also have experience of building and site surveying, a sound knowledge of construction and a live interest in historic architecture. Theodolite and levelling knowledge are desirable.

Salary £442 to £695 per annum. Starting pay according to age and experience. Prospects of promotion and permanency.

State age and full details of training and experience to Chief Architect, Ministry of Works, W.G.10/C.A.10(D), Abell House, John Islip St., London, S.W.1. [8609]

BOROUGH OF WORTHING.**ARCHITECTURAL ASSISTANT—
New Grade II.**

APPLICATIONS are invited for appointment as Architectural Assistant in the Architect's Section of the Borough Engineer's Department.

Applicants should be suitably qualified, having passed at least the intermediate examination of the R.I.B.A. and have had experience in design and in the preparation of working drawings for work carried out by Local Authorities, including school buildings.

The appointment will be on the new A.P.T. Grade II (£560-£640 per annum) and is subject to the National Scheme of Conditions of Service of Local Government Officers, to the Local Government Superannuation Acts, and to the successful applicant passing satisfactorily a medical examination.

Applications endorsed "Architectural Assistant," stating age, status, qualifications, experience, present and past appointments with dates and accompanied by at least two copies of recent testimonials, should be sent to the Borough Engineer and Surveyor, Town Hall, Worthing, so as to reach him not later than Friday, 7th January, 1955.

ERNEST G. TOWNSEND,
Town Clerk.

Town Hall,
Worthing.
6th December, 1954. [8628]

ABERDEEN HARBOUR COMMISSIONERS.**HARBOUR ENGINEER'S DEPARTMENT.**

APPLICATIONS are invited for the post of Structural Engineering Assistant or Building Surveyor in the Harbour Engineer's Office, Aberdeen. Applicants should have experience in structural steelwork, reinforced concrete and general building design and construction. The salary £490-£680 according to qualifications rising by annual increments of £15.

Applications, stating age and qualifications, with full details of experience, together with copies of recent testimonials, should be lodged with the Harbour Engineer, 15, Regent Quay, Aberdeen, not later than 8th January, 1955.

Harbour Engineer's Office,
Aberdeen.
4th December, 1954. [8626]

APPOINTMENTS—contd.**OFFICE OF THE RECEIVER
FOR THE METROPOLITAN POLICE
DISTRICT.**

APPLICATIONS are invited for unestablished appointments as **LEADING ARCHITECTURAL ASSISTANTS** in the Architect and Surveyor's Department. The work is concerned with the design and construction of police dwellings and buildings and candidates will be required to work in the Westminster area.

Rates of pay:—
Men: £665 x £720—£725 x £750—£780.

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Application forms from the Chief Architect, Architect and Surveyor's Department, New Scotland Yard, London, S.W.1, marking the envelope "Architectural Assistants." [8632]

BASILDON DEVELOPMENT CORPORATION.**CHIEF ARCHITECT'S DEPARTMENT.**

APPLICATIONS are invited for the following posts on the staff of the Chief Architect/Planner, Noel Tweddell, A.R.I.B.A.:

(a) **ASSISTANT ARCHITECTS**, Grade IVB, salary £760-£860.

(b) **ASSISTANT ARCHITECTS**, Grade IVA, salary £660-£760.

One applicant for post (a) will be selected to work in a Housing Group and must have experience in contemporary house design, preparation of working drawings and supervision of contracts; another applicant will be selected to work in the Industrial Section and must have experience in the design of small and medium-size contemporary factories, preparation of working drawings and the supervision of contracts.

The successful applicants for post (b) will work in a Housing Group and must have experience in contemporary house design, preparation of working drawings and supervision of contracts. Town planning experience will be an asset.

These appointments give an exceptional opportunity to young and progressive architects to design and build in the contemporary idiom.

A construction programme will be carried out exceeding £3,000,000 a year for the next three years and will comprise all types of buildings in a New Town. There is excellent scope for advancement and variety of work for assistants with initiative and energy and enthusiasm.

All applicants must have a professional qualification in Architecture.

The commencing salary within each grade will be in accordance with experience and ability. All appointments are subject to the provisions of the Local Government and Other Officers Superannuation Act and medical examination.

House accommodation in the New Town may be available.

Applications must be made on the special form (obtainable from the Chief Architect) to the General Manager, Basildon Development Corporation, Gifford House, Basildon, Essex, by the 31st December, 1954, and the envelope endorsed with the relevant appointment. [8633]

COUNTY BOROUGH OF BURY.

APPLICATIONS are invited from suitably qualified persons for the position of Senior Quantity Surveyor in the Borough Engineer's Department. Salary Grade A.P.T. VI (£695-£760).

The appointment is superannuable, and subject to medical examination.

Applications, stating age, details of training, qualifications and experience, together with the names and addresses of two persons to whom reference may be made, must reach me not later than 24th December, 1954.

EDWARD S. SMITH,
Town Clerk.

Town Hall,
Bury,
7th December, 1954. [8627]

APPOINTMENTS—contd.**COUNTY BOROUGH OF GREAT YARMOUTH.****EDUCATION COMMITTEE.****SCHOOLS ARCHITECT'S DEPARTMENT.**

APPLICATIONS are invited from Associate Members of the R.I.B.A. for the appointment of Senior Assistant Architect on the permanent staff, salary Grade VII (£735-£810).

Candidates should have a knowledge of modern school design and construction.

The Council is unable to assist with housing accommodation. An allowance of 25s per week will be paid for a period not exceeding six months, in the event of a married man being appointed who is unable to find accommodation.

Previous Local Government experience is not essential. Appointment will be terminable by one month's notice on either side, and is subject to the provisions of the Local Government Superannuation Act, 1937.

Canvassing will be deemed a disqualification and candidates must disclose any relationship to any member of or holder of any senior office under the Council. Candidates who fail to do so will be disqualified or, if appointed, liable to dismissal without notice.

Applications, stating age, qualifications, experience and giving details of past and present appointments, together with the names of two referees, should reach the Schools Architect, 22 Euston Road, Great Yarmouth, by December 23rd, 1954.

D. G. FARROW,
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[8623]

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[8638]

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J. C. JONES,
Director of Education.
[8621]

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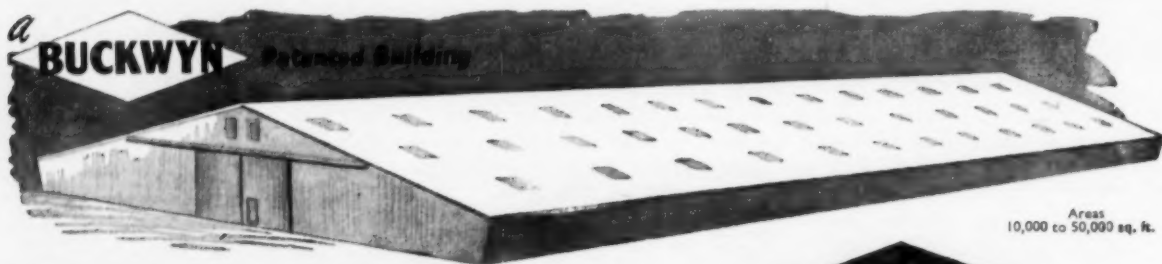
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